

**UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK**

JOANNE HART and SANDRA BUENO, on behalf
of themselves and all others similarly situated,

Plaintiffs,

v.

BHH, LLC d/b/a Bell + Howell and VAN HAUSER
LLC

Defendants.

Civil Action No. 1:15-CV-04804-
WHP

**DEFENDANTS' RESPONSE TO PLAINTIFFS' STATEMENT OF ADDITIONAL MATERIAL
FACTS THAT PRESENT A GENUINE ISSUE FOR TRIAL**

NOW COME Defendants, BHH, LLC d/b/a BELL + HOWELL and VAN HAUSER, LLC, by and through their counsel, LEAHY, EISENBERG, AND FRAENKEL, LTD., and for their Response to Plaintiffs' Statement of Additional Material Facts, state as follows:

1. Joanne Hart purchased a pack of Bell + Howell Ultrasonic Pest Repellers on July 4, 2014 from the Home Shopping Network ("HSN") for \$42.95. Hart Decl. (ECF No. 67) ¶ 1.

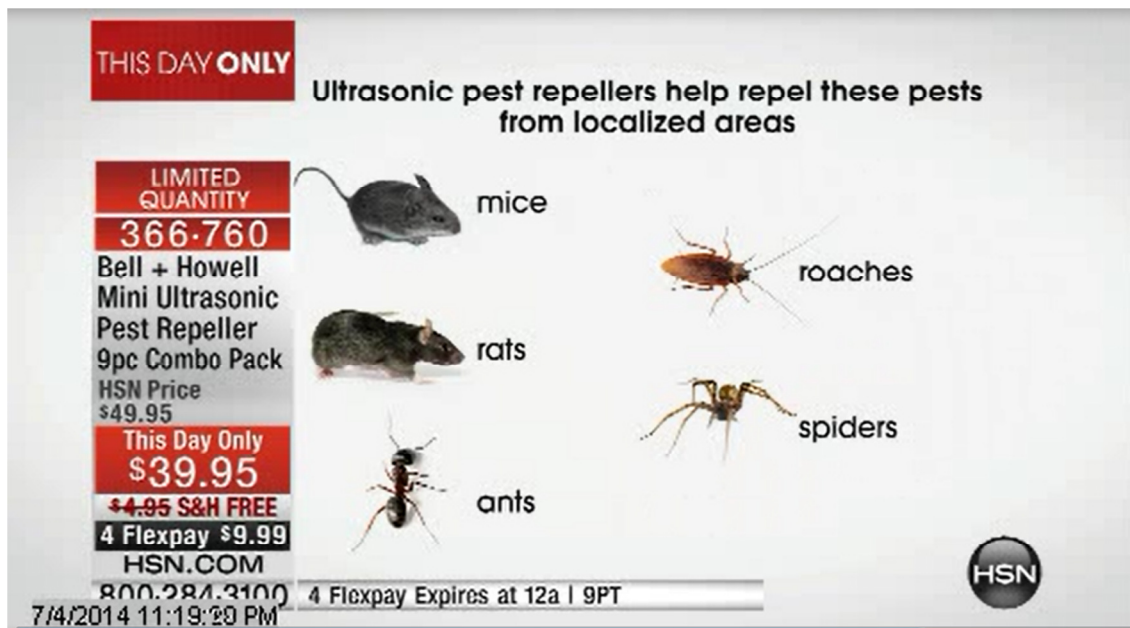
Defendants' Response: Disputed. Plaintiffs' statement is inconsistent with Ms. Hart's testimony. Ms. Hart testified that she did not recall the exact date that she purchased the repeller. See Hart Dep. at pp. 65:14-66:10; 146:16-20.

2. Prior to purchasing the pest repellers, Ms. Hart viewed programming on HSN which stated that the Pest Repellers (1) are "ultrasonic pest repeller[s]" that (2) repel "ants," "roaches,"

“spiders,” “mice,” and “rats,” and (3) will “chase the[pests] out of the house.” Hart Decl. (ECF No. 67) ¶ 2.¹

Defendants’ Response: Disputed. Plaintiffs’ statement is inconsistent with Ms. Hart’s testimony. Ms. Hart testified that she recalled watching an advertisement on HSN for the repeller. Ms. Hart testified that she recalled that the repeller would repel bugs, spiders, rodents, and squirrels, and did not harm indoor animals like dogs and cats. See Hart Dep. at pp. 48:12-54:13.

3. The following screenshot appeared on HSN’s programming that Ms. Hart viewed on July 4, 2014:



Hart Decl. (ECF No. 67) ¶ 3.

Defendants’ Response: Disputed. Plaintiffs’ statement is inconsistent with Ms. Hart’s testimony. Ms. Hart testified that she does not recall the exact date that she purchased the repeller or watched the HSN programming. See Hart Dep. at pp. 48:12-54:13; 65:14-66:10.

¹ HSN produced a copy of its programming regarding the pest repellers from July 4, 2014. Plaintiffs are happy to provide the video file to the Court, upon request.

4. Ms. Hart viewed programming regarding the Pest Repellers on HSN on other occasions as well. Each time, the programming included the same three aforementioned representations. Hart Decl. (ECF No. 67) ¶ 4.

Defendants' Response: Disputed. Plaintiffs' statement is inconsistent with Ms. Hart's testimony. Ms. Hart testified that she recalled watching an advertisement on HSN for the repeller. Ms. Hart testified that she recalled that the repeller would repel bugs, spiders, rodents, and squirrels, and did not harm indoor animals like dogs and cats. See Hart Dep. at pp. 48:12-54:13.

5. Ms. Hart relied on these representations in purchasing the Pest Repellers. She would not have purchased them had she known that they were false and misleading. Hart Decl. (ECF No. 67) ¶ 5.

Defendants' Response: Defendants dispute Plaintiffs' statement to the extent that Hart relied on any representations other than those as written on the product packaging.

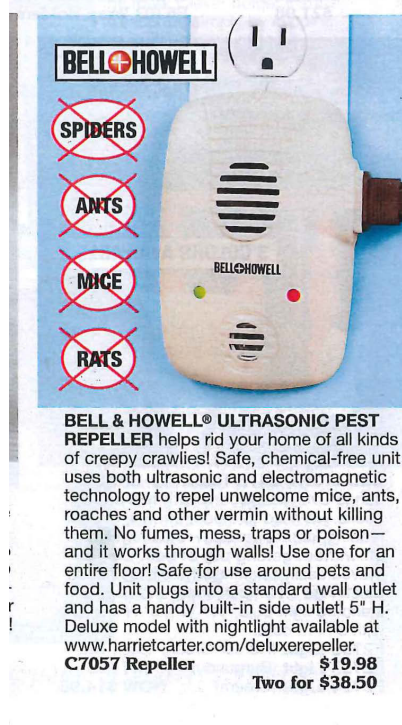
6. Ms. Hart stated that the reason she became involved in this litigation was “[b]ecause I felt that this was a product that was not working and that other people that bought it should be notified, number one; and, number two, I should be able to be compensated – get my money back for what I paid.” Kopel Decl. Ex. 29, Hart Dep. at 146:16-20.

Defendants' Response: Disputed. Plaintiffs' statement is inconsistent with Ms. Hart's testimony. Ms. Hart testified that did not do anything to determine the efficacy of the product and that she continued to use the product until she was notified by counsel that the product may be “ineffective.” Ms. Hart became involved in the litigation after she was contacted by counsel. See Hart Dep. at pp. 107:17-25; 108:1-25.

7. Ms. Bueno purchased a Bell + Howell Ultrasonic Pest Repeller on May 21, 2016 from Harriet Carter Gifts Catalog for \$19.98. Bueno Decl. (ECF NO. 68) ¶ 1.

Defendants' Response: **Disputed.** **Plaintiffs' statement mischaracterizes Ms. Bueno's testimony. Ms. Bueno testified she purchased the product in May 2016 but did not recall the exact date. See Bueno Dep.at pp. 44:10-23.**

8. The image Ms. Bueno viewed in the catalog prior to purchasing the Pest Repeller



appeared as follows:

Bueno Decl. (ECF NO. 68) ¶ 2; *See also* Kopel Decl. Ex. 22 (excerpts from Harriet Carter Gifts Catalogue).

Defendants' Response: **Not disputed.**

9. The aforementioned catalog listing stated that the Bell + Howell Pest Repeller (1) is an “ultrasonic pest repeller” that (2) repels “ants,” “roaches,” “spiders,” “mice,” and “rats,” and (3) will “rid your home” of pests. Bueno Decl. (ECF NO. 68) ¶ 3.

Defendants' Response: **The catalog listing speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the catalog listing as written.**

10. Ms. Bueno relied on the aforementioned representations in purchasing the Bell + Howell pest repeller in that she would not have purchased it had she known that they were false and misleading. Bueno Decl. (ECF NO. 68) ¶ 4.

Defendants' Response: Defendants dispute Plaintiffs' statement to the extent that Hart relied on any representations other than those as written on the product packaging.

11. The Bell + Howell Pest Repellers are uniformly "sold as pest repellers that repel ants, rats, mice, spiders, and roaches." See Kopel Decl. Ex. 20, 11/30/16 Mishan Dep. at 213:10-214:8.

Defendants' Response: Disputed. Plaintiffs' statement mischaracterizes Mr. Mishan's testimony. The Bell + Howell Pest Repellers are sold as pest Repellers which have additional features such as a night light or ionizer. See Mishan Dep. at pp. 211:4-215:7.

12. The purported function of the pest repellers is to "use ultrasonic technology which is safe and environment[ally] friendly, but effective to repel ... pests." Kopel Decl. Ex. 8, Feuerstein Dep. at 43:19-21.

Defendants' Response: Not disputed.

13. Class members purchased the Pest Repellers in two ways. Some consumers purchased them at brick and mortar stores, while others purchased them through mail order. Kopel Decl. Ex. 19, 2/3/16 Mishan Dep. at 41:9-18. (The packaging of the Bell + Howell devices purchased at brick and mortar stores is hereafter referred to as the "Retail Packaging.")

Defendants' Response: Not disputed.

14. But regardless of how consumers purchased the Pest Repellers, they were exposed to Defendants' 3 Common Representations made to every class member: that the Pest Repellers (1) are "ultrasonic pest repellers" that (2) repel "ants, roaches, spiders, mice, and rats," and (3) will "drive pests out" of the home. See PSOF ¶¶ 15-18, 25-29.

Defendants' Response: **Disputed. Plaintiffs' statement is an opinion that is not supported by the evidence in this case.**

15. In the course of selling the Bell + Howell Pest repellers, programming on HSN stated: "Ultrasonic pest repellers help repel ... mice, rats, ants, roaches, and spiders," and that the pest repellers would "chase them out of the house." *See* Hart Decl. (ECF No. 67) ¶¶ 2-4.

Defendants' Response: **Disputed. Plaintiffs' statement mischaracterizes Ms. Hart's testimony. Ms. Hart testified that she recalled watching an advertisement on HSN for the repeller. Ms. Hart testified that she recalled that the repeller would repel bugs, spiders, rodents, and squirrels, and did not harm indoor animals like dogs and cats. See Hart Dep. at pp. 48:12-54:13.**

16. In its listing for the Bell + Howell pest repellers, the Harriet Carter Gifts Catalogue states that "Bell + Howell Pest Repellers" use "ultrasonic waves to repel unwelcome critters" and will "Drive mice, rats, roaches, ants and other pests from your home." The listing also indicates that it will repel spiders. *See* Kopel Decl. Ex. 22 (Harriet Carter Gifts Catalogue).

Defendants' Response: **The catalog listing speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the catalog listing as written.**

17. In its listing for the Bell + Howell pest repellers, the Carol Wright Gifts Catalogue states that "Bell + Howell Ultrasonic Pest Repeller[s]" will "get rid of ants, spiders, mice, roaches, [and] rats," and "drive pests out of your living space." *See* Kopel Decl. Ex. 23 (Carol Wright Gifts Catalogue).

Defendants' Response: **The catalog listing speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the catalog listing as written.**

18. In its listing for the Bell + Howell pest repellers, the Dr. Leonard's Healthcare Catalogue also states that "Bell + Howell Ultrasonic Pest Repeller[s]" will "get rid of ants, spiders, mice, roaches,

[and] rats,” and “drive pests out of your living space.” *See* Kopel Decl. Ex. 24 (Dr. Leonard’s Healthcare Catalogue).

Defendants’ Response: **The catalog listing speaks for itself. Defendants object to Plaintiffs’ statement to the extent that it is inconsistent with the catalog listing as written.**

19. The pest repellers purport to “drive pests out of a home of office.” Kopel Decl. Ex. 8, Feuerstein Dep. at 58:3-8.

Defendants’ Response: **Disputed. Plaintiffs’ statement mischaracterizes Ms. Feuerstein’s testimony. Ms. Feuerstein testified that the pest repeller will repel pests “out of the area” of the room where the pest repeller is located. See Feuerstein Dep. at pp. 57:14-59:2.**

20. The Pest Repellers are manufactured by a Chinese company called Intellitec International LTD, which sells them to Van Hauser LLC. Kopel Decl. Ex. 8, Feuerstein Dep. at 11:10-11.

Defendants’ Response: **Not disputed.**

21. Intellitec’s owner and Managing Director, Debbie Feuerstein, is “the inventor of Bell + Howell Pest Repellers.” Kopel Decl. Ex. 8, Feuerstein Dep. at 88:10-13 (“Q: And you consider yourself the inventor of the Bell + Howell pest repellers, correct? A: Correct.”).

Defendants’ Response: **Disputed. Plaintiffs’ statement mischaracterizes Ms. Feuerstein’s testimony. Ms. Feuerstein testified that she has design patents for several companies including Sunbeam, First Alert, and Bell + Howell. See Feuerstein Dep. at pp. 86:20-89:3.**

22. Intellitec wrote all the claims and statements appearing on the Bell + Howell device’s Retail Packaging and instruction sheet. Kopel Decl. Ex. 8, Feuerstein Dep. at 50:17-51:22.

Defendants’ Response: **Not disputed.**

23. Ms. Feuerstein personally approved all artwork appearing on the Pest Repeller’s Retail Packaging before it hit the market. Kopel Decl. Ex. 8, Feuerstein Dep. at 53:6-10.

Defendants' Response: Not disputed.

24. Ms. Feuerstein has no “scientific or engineering degree” and “no training in pest management” or “ultrasonic sound.” Kopel Decl. Ex. 8, Feuerstein Dep. at 221:16-222:8.

Defendants' Response: Disputed. Plaintiffs' statement mischaracterizes Ms. Feuerstein's testimony. Ms. Feuerstein testified that she does not have educational training in ultrasonic sound, but has over eighteen years of experience in the industry and has done extensive research on ultrasonic technology. See Feuerstein Dep. at pp. 221:16-222:8.

25. “[A]ll the packaging designs for the Bell + Howell pest repellers stated that they are ultrasonic pest repellers.” Kopel Decl. Ex. 8, Feuerstein Dep. at 56:3-7.

Defendants' Response: Not disputed.

26. All the artwork for the Retail Packaging of Bell + Howell pest repellers included an illustration indicating that it would repel “ants, mice/rats, spiders, and roaches.” Kopel Decl. Ex. 8, Feuerstein Dep. at 56:8-21.

Defendants' Response: Not disputed.

27. All the artwork for the Retail Packaging of the Bell + Howell pest repellers stated “plug it in...drive pests out.” Kopel Decl. Ex. 8, Feuerstein Dep. at 56:22-25.

Defendants' Response: Not disputed.

28. Ms. Feuerstein testified that this phrase was intended to mean that the repellers would drive pests out from the home. Kopel Decl. Ex. 8, Feuerstein Dep. at 58:9-11 (“Q: Oh, so it means it drives pests out from the home? A: Right, right.”)

Defendants' Response: Disputed. Ms. Feuerstein testified that the pest repeller will repel pests “out of the area” of the room where the pest repeller is located. See Feuerstein Dep. at pp. 57:14-59:2.

29. Defendants' expert witness, Dr. Borth, also testified that he thought that it was reasonable for consumers to understand the claim to refer to people's houses:

Q: Do you think it ... is unreasonable for a consumer to understand drives pests out to mean drives pests out of the house?

A: I do not.

Q: You think that is a reasonable interpretation?

A: I sure do.

Kopel Decl. Ex. 7, Borth Dep. at 46:19-25.

Defendants' Response: Disputed. Plaintiffs' statement mischaracterizes Dr. Borth's testimony. See Borth Dep. at pp. 294:19-297:16. By Errata correction dated February 14, 2018, Dr. Borth corrected his response to a question he heard verbalized as the opposite of the question transcribed. See Defendants' Response, Dkt. # 145, at p. 16.

30. The Retail Packaging of the Bell + Howell Pest Repellers states "Home & Office Use."
Kopel Decl. Ex. 8, Feuerstein Dep. at 59:5-16.

Defendants' Response: Not disputed.

31. The Retail Packaging of the Bell + Howell Pest Repellers states on the back side:

NOTE: Ultrasonic signals will lose intensity as it travels. It is also absorbed by soft objects such as carpeting and is reflected by hard surfaces, such as furniture. Ultrasonic signals cannot reach nesting or feeding places behind walls, under floors, or within cracks. Multiple unites may be necessary for larger rooms.

In some cases, over time, certain rodents may become accustomed to ultrasonic signals. Some may return to their feeding or nesting areas even in the presence of an ultrasonic product

See Kopel Decl Ex. 21.

Defendants' Response: In response, Defendants state that the Retail Packaging speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the Retail Packaging as written.

32. This language originally appeared on the packaging from another brand pest repeller manufactured by Intellitec. Kopel Decl. Ex. 8, Feuerstein Dep. at 61:10-12.

Defendants' Response: Not disputed.

33. Recognizing the weight of the scientific evidence against the efficacy of electronic pest control devices, the Federal Trade Commission ('FTC') has issued multiple letters to, and even instituted several actions against, manufacturers and retailers of these devices. *See* Kopel Decl. Exs. 30 & 31.

Defendants' Response: Defendants do not dispute that the FTC issued letters with regard to the efficacy of electronic pest control devices, although Defendants specifically deny having received any such letter. Defendants object to Plaintiffs' statement to the extent it is inconsistent with the letters as written.

34. Ms. Feuerstein and employees of Intelitec conducted testing of the Bell + Howell pest repellers in the Intellitec factory in China. Kopel Decl. Ex. 8, Feuerstein Dep. at 82:12-21.

Defendants' Response: Not disputed.

35. Testing conducted on the Bell + Howell ultrasonic pest repellers by Intellitec in its factory in China revealed that the presence of furniture will "reduce or block the ultrasonic signal." Kopel Decl. Ex. 8, Feuerstein Dep. at 63:4-12.

Defendants' Response: Not disputed.

36. This test was conducted using "a big piece of sulfur or maybe cabinets" which showed that the solid object blocked the ultrasonic signals. Kopel Decl. Ex. 8, Feuerstein Dep. at 64:12-15.

Defendants' Response: Not disputed.

37. Testing conducted on the Bell + Howell ultrasonic pest repellers by Intellitec in its factory in China revealed that carpeting will absorb the ultrasonic signals. Kopel Decl. Ex. 8, Feuerstein Dep. at 64:8-65:15 (“We also test even on carpeting, it will be absorbed, yes.”); Kopel Decl. Ex. 2, Potter Report ¶ 16 (“The waves are also rapidly absorbed by soft-textured materials such as cloth, paper, cardboard, and insulation.”).

Defendants' Response: Defendants do not dispute the statements made by Ms. Feuerstein in her deposition. Defendants object to Plaintiffs' citation to its own expert and because its statement is an opinion that is not supported by the evidence in this case.

38. This Intellitec tests were run in the following fashion: “With and without carpeting and before and after the furniture. We compare the decibel output result.” Kopel Decl. Ex. 8, Feuerstein Dep. at 65:7-9.

Defendants' Response: Not disputed.

39. Ms. Feuerstein testified that the presence of a rug would also absorb the ultrasonic signals from the Bell + Howell pest repeller. Kopel Decl. Ex. 8, Feuerstein Dep. at 65:16-19 (“Yes, carpet and rug, the same thing.”); Kopel Decl. Ex. 2, Potter Report ¶ 16 (“The waves are also rapidly absorbed by soft-textured materials such as cloth, paper, cardboard, and insulation.”)

Defendants' Response: Defendants do not dispute the statements made by Ms. Feuerstein in her deposition. Defendants object to Plaintiffs' citation to its own expert and because its statement is an opinion that is not supported by the evidence in this case.

40. Ms. Feuerstein testified that the presence of a bed would also absorb the ultrasonic signals from the Bell + Howell pest repeller. Kopel Decl. Ex. 8, Feuerstein Dep. at 65:20-25 (“yes, it

would block the signal”); Kopel Decl. Ex. 2, Potter Report ¶ 16 (“The waves are also rapidly absorbed by soft-textured materials such as cloth, paper, cardboard, and insulation.”).

Defendants’ Response: **Defendants do not dispute the statements made by Ms. Feuerstein in her deposition. Defendants object to Plaintiffs’ citation to its own expert and because its statement is an opinion that is not supported by the evidence in this case.**

41. Ms. Feuerstein testified that the presence of metal would reflect the ultrasonic signals from the Bell + Howell pest repeller. Kopel Decl. Ex. 8, Feuerstein Dep. at 66:5-10 (“Metal, yes.”).

Defendants’ Response: **Not disputed.**

42. Ms. Feuerstein testified that she has carpeting, couches, and beds in her house. Kopel Decl. Ex. 8, Feuerstein Dep. at 66:15-22.

Defendants’ Response: **Not disputed.**

43. Ms. Feuerstein testified that she has desks, carpeting, and tables at her office. Kopel Decl. Ex. 8, Feuerstein Dep. at 35:20-36:1.

Defendants’ Response: **Not disputed.**

44. Ms. Feuerstein testified that she would expect that most people have carpeting, beds, and couches in their houses. Kopel Decl. Ex. 8, Feuerstein Dep. at 66:23-67:1.

Defendants’ Response: **Not disputed.**

45. Ms. Feuerstein testified that “ultrasonic is very directional ... if it’s blocked or it’s covered by some --- doesn’t matter it’s wood or it’s soft sulfur or metal, it might block of the decibel emission.” Kopel Decl. Ex. 8, Feuerstein Dep. at 67:18-23; *see also* Kopel Decl. Ex. 2, Potter Report ¶ 16 (“Ultrasonic sound waves are highly directional, and are unable to penetrate or bend around solid objects such as cabinets, doors, furniture, appliances, walls, floors or ceilings.”).

Defendants' Response: **Disputed.** **Plaintiffs' statement mischaracterizes Ms. Feuerstein's testimony. Ms. Feuerstein admits that ultrasonic waves cannot repel a pest unless it is within the line of the sound waves. See Feuerstein Dep. at pp. 67:24-69:8. Defendants object to Plaintiffs' citation to its own expert and because its statement is an opinion that is not supported by the evidence in this case.**

46. Ms. Feuerstein agreed that the Bell + Howell pest repellers "cannot repel pests from nesting and feeding places behind walls, under floors, and within cracks" because the ultrasonic signals cannot reach there. Kopel Decl. Ex. 8, Feuerstein Dep. at 68:22-69:8; Kopel Decl. Ex. 2, Potter Report ¶ 16 ("Consequently, they cannot reach cracks, crevices, voids, corners, and other protected places where most pests live.").

Defendants' Response: **Disputed.** **Plaintiffs' statement mischaracterizes Ms. Feuerstein's testimony. Ms. Feuerstein admits that ultrasonic waves cannot repel a pest unless it is within the line of the sound waves. See Feuerstein Dep. at pp. 67:24-69:8. Defendants object to Plaintiffs' citation to its own expert and because its statement is an opinion that is not supported by the evidence in this case.**

47. At her deposition, Ms. Feuerstein could not list a single material that a wall or floor could be made from the could be penetrated by ultrasonic sound waves. Kopel Decl. Ex. 8, Feuerstein Dep. at 75:24-76:15.

Defendants' Response: **Disputed.** **Plaintiffs' statement mischaracterizes Ms. Feuerstein's testimony. Ms. Feuerstein testified that it is possible that a wall or floor could be built from a material that could be penetrated by ultrasound. See Feuerstein Dep. at pp. 75:24-76:2.**

48. Ms. Feuerstein and Intellitec performed testing of the Bell + Howell pest repellers in their factory in China where they observed that pests became accustomed to the ultrasonic signals and

returned to the area “even in the presence of an ultrasonic product.” Kopel Decl. Ex. 8, Feuerstein Dep. at 76:25-84:3; Kopel Decl. Ex. 2, Potter Report ¶ 16 (“[A]nimals tend to adapt and adjust to non-harmful sounds and stimuli in their environment. Any initial aversion to the sound is rapidly overcome. Habituation in response to ultrasound has been shown repeatedly with rats and mice, causing them to soon repopulate the avoided area, typically within hours, days, or a few weeks depending on conditions.”).

Defendants’ Response: Defendants do not dispute that QMANN conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs’ statement to the extent that it is inconsistent with the report as written. Defendants object to Plaintiffs’ citation to its own expert and because its statement is an opinion that is not supported by the evidence in this case.

49. Ultrasonic and electromagnetic emissions diminish in intensity at short distances from the device, conflicting with manufacturer claims about their purported range of effectiveness. Kopel Decl. Ex. 2, Potter Report ¶ 16.

Defendants’ Response: Disputed. Plaintiffs’ statement is an opinion that is not supported by the evidence in this case.

50. A significant limitation of ultrasonic devices is the need to be plugged into electrical outlets. Since electrical outlets occur at fixed locations (e.g. 12 inches above floor level), plug-in repellents often cannot be directed toward the specific areas where pests are living. Kopel Decl. Ex. 2, Potter Report ¶ 16.

Defendants’ Response: Disputed. Plaintiffs’ statement is an opinion that is not supported by the evidence in this case.

51. Dr. Whitford testified that Bell + Howell repellers cannot work in the area behind the Bell + Howell repeller. Kopel Decl. Ex. 5, Whitford Dep. at 85:1-3 (“Q: Would an ultrasonic device affect an area behind it? A: No.”).

Defendants’ Response: Disputed. Plaintiffs’ statement mischaracterizes Dr. Whitford’s testimony. Dr. Whitford testified that ultrasonic waves are directional and are reduced in a “sound shadow”. Plaintiffs’ statement and line of questioning at the deposition presupposes the use of only one pest repeller. See Whitford Dep. at 72:4-14.

52. Dr. Whitford testified that Bell + Howell repellers cannot work in the area next to the Bell + Howell repeller. Kopel Decl. Ex. 5, Whitford Dep. at 85:4-5 (“Q: Would it affect the area immediately next to it? A: Not at close range.”).

Defendants’ Response: Disputed. Plaintiffs’ statement mischaracterizes Dr. Whitford’s testimony. Dr. Whitford testified that ultrasonic waves are directional and are reduced in a “sound shadow”. Plaintiffs’ statement and line of questioning at the deposition presupposes the use of only one pest repeller. See Whitford Dep. at 72:4-14.

53. Dr. Whitford testified that Bell + Howell repellers cannot work in the area underneath the Bell + Howell repeller. Kopel Decl. Ex. 5, Whitford Dep. at 85:7-8 (“Q: How about underneath it? A: No.”).

Defendants’ Response: Disputed. Plaintiffs’ statement mischaracterizes Dr. Whitford’s testimony. Dr. Whitford testified that ultrasonic waves are directional and are reduced in a “sound shadow”. Plaintiffs’ statement and line of questioning at the deposition presupposes the use of only one pest repeller. See Whitford Dep. at 72:4-14.

54. Dr. Whitford testified that Bell + Howell repellers cannot work if the outlet is located on the same wall as the pests are using to come into the house. Kopel Decl. Ex. 5, Whitford Dep. at 139:3-

10 (agreeing that “Ms. Bueno couldn’t have expected the repeller to work because it can’t possibly repel or drive our pests that coming in from the same wall that it’s plugged into.”).

Defendants’ Response: Disputed. Plaintiffs’ statement mischaracterizes Dr. Whitford’s testimony. Dr. Whitford testified that ultrasonic waves are directional and are reduced in a “sound shadow”. Plaintiffs’ statement and line of questioning at the deposition presupposes the use of only one pest repeller. See Whitford Dep. at 72:4-14.

55. Dr. Whitford testified that Bell + Howell repellers cannot work in a living room with “a couch, two end tables on the couch, a leather chair, a lounge chair, a coffee table, an entertainment center, [and] a television.” Kopel Decl. Ex. 5, Whitford Dep. at 141:20-143:4.

Defendants’ Response: Disputed. Plaintiffs’ statement mischaracterizes Dr. Whitford’s testimony. Dr. Whitford testified that ultrasonic waves are directional and are reduced in a “sound shadow”. Plaintiffs’ statement and line of questioning at the deposition presupposes the use of only one pest repeller. See Whitford Dep. at 72:4-14.

56. Defendants’ experts testified that the ultrasonic signals from the Bell + Howell repellers are blocked by cardboard. Kopel Decl. Ex. 5, Whitford Dep. at 30:1-4 (a “cardboard box ... stops the sound.”); Kopel Decl. Ex. 7, Borth Dep. at 263:8-9 (“Bell + Howell repellers do[] not penetrate cardboard.”); *id.* at 263:24-264:2 (“Q: And it wouldn’t be unacceptable to expect that people might have cardboard in their houses right? A: Yes.”).

Defendants’ Response: Disputed. Plaintiffs’ statement mischaracterizes Dr. Whitford’s and Dr. Borth’s testimony. Dr. Whitford testified that the range of frequency of ultrasonic waves are limited by certain variables. See Whitford Dep, at 68:11-20. Dr. Borth testified that providing for harborages is a flaw in testing design. See Borth Dep., at 161:7-12.

57. Dr. Whitford testified that ultrasonic signals are absorbed by carpet. Kopel Decl. Ex. 5, Whitford Dep. at 68:18-20 (“Carpeting, any soft material, insulation and so forth greatly reduces the range that the sound can travel.”).

Defendants’ Response: Disputed. Plaintiffs’ statement mischaracterizes Dr. Whitford’s testimony. Dr. Whitford testified that the amplitude of ultrasonic waves can be impacted by certain variables. See Whitford Dep. at 68:11-20.

58. Dr. Borth testified that “Bell + Howell repellers ... do[] not penetrate glass.” Kopel Decl. Ex. 7, Borth Dep. at 263:8-10.

Defendants’ Response: Disputed. Plaintiffs’ statement mischaracterizes Dr. Borth’s testimony. Dr. Borth testified that providing for harborages is a flaw in testing design. See Borth Dep. at 161:7-12.

59. Dr. Whitford testified that ultrasonic signals cannot reach mice in a bed. Kopel Decl. Ex. 5, Whitford Dep. at 108:22-109:11 (“Q: If a mouse was inside of a bed – would that be common that a mouse could get inside of a bed? A: Oh, yeah. ... Q: Could an ultrasonic device reach that mouse? A: I don’t know. It depends how heavy that covers are on it probably. Q: But with heavy covers, probably not? A: Yeah.”).

Defendants’ Response: Disputed. Plaintiffs’ statement mischaracterizes Dr. Whitford’s testimony. Dr. Whitford testified the range and frequency of ultrasonic waves may be impacted by certain variables. See Whitford Dep. at 68:11-20.

60. Dr. Whitford testified that ultrasonic signals cannot reach inside cupboards. *Id.*, Whitford Dep. at 127:1-4 (“Q: If a cupboard is closed, can an ultrasonic sound wave penetrate the cupboard to get at a roach that’s inside the cupboard? A: No.”).

Defendants' Response: Disputed. Plaintiffs' statement mischaracterizes Dr. Whitford's testimony. Dr. Whitford testified the range and frequency of ultrasonic waves may be impacted by certain variables. See Whitford Dep. at 68:11-20.

61. Dr. Whitford testified that the signals cannot reach across a kitchen which has a counter or bar in the middle of it. Kopel Decl. Ex. 5, Whitford Dep. at 136:3-11 ("Q: Because on the other side of [the] counter the sound waves can't reach, right? A: Right. Q: And even to the right and to the left of that bar, the sound waves can't reach, right? A: Yes. Q: Do you have a setup like that in your kitchen? A: Absolutely.").

Defendants' Response: Disputed. Plaintiffs' statement mischaracterizes Dr. Whitford's testimony. Dr. Whitford testified that ultrasonic waves are directional and are reduced in a "sound shadow". Plaintiffs' statement and line of questioning at the deposition presupposes the use of only one pest repeller. See Whitford Dep. at 72:4-14.

62. Dr. Whitford testified that Bell + Howell repellers cannot be effective against mice if they are plugged in above 14 to 16 inches above the floor. Kopel Decl. Ex. 5, Whitford Dep. at 112:11-13 ("Once you get above 14 to 16 inches, then the sound is not sweeping the floor. You know, the mice are not hanging in mid air.").

Defendants' Response: Disputed. Plaintiffs' statement mischaracterizes Dr. Whitford's testimony. Dr. Whitford testified the range and frequency of ultrasonic waves may be impacted by certain variables. See Whitford Dep. at 68:11-20.

63. Dr. Whitford testified that a Bell + Howell device plugged in at ground level could not repel a spider on the wall. Kopel Decl. Ex. 5, Whitford Dep. at 124:14-125:4 (device plugged in near ground level "would not be able to be effective against a spider that's up on the wall").

Defendants' Response: **Disputed.** **Plaintiffs' statement mischaracterizes Dr. Whitford's testimony. Dr. Whitford testified the range and frequency of ultrasonic waves may be impacted by certain variables. See Whitford Dep. at 68:11-20.**

64. Dr. Borth testified that Bell + Howell repellers are less likely to work unless the pests are starving. Kopel Decl. Ex. 7, Borth Dep. at 274:23-275:3 ("It would be less likely to see the repellent effect because they're not encouraged to seek out any food, they're satiated.")

Defendants' Response: **Disputed.** **Plaintiffs' statement mischaracterizes Dr. Borth's testimony. Dr. Borth testified the use of food is a flaw in the testing design because it does not encourage "locomotion". See Borth Dep. at pp 276:1-276:13.**

65. Dr. Borth testified that most kitchens have adequate crumbs or food that insects could access, including in garbages. Kopel Decl. Ex. 7, Borth Dep. at 276:24-277:5 ("Q: ... most kitchens have adequate crumbs or food that insects could access; right? A: Yes, I'll agree to that. Q: Insects can get inside of people's garbages, right? A: Yes.").

Defendants' Response: **Disputed.** **Plaintiffs' statement mischaracterizes Dr. Borth's testimony. Dr. Borth testified the use of food is a flaw in the testing design because it does not encourage "locomotion". See Borth Dep. at pp 276:1-276:13.**

66. Dr. Whitford testified that mice typically nest under floors and behind walls. Kopel Decl. Ex. 5, Whitford Dep. at 31:15-17 ("Q: Would you agree that in houses mice can typically nest behind walls or underneath floors? A: Absolutely.").

Defendants' Response: **Not disputed.**

67. Dr. Whitford testified that the Bell + Howell repellers cannot reach critters behind walls or under floors. Kopel Decl. Ex. 5, Whitford Dep. at 29:24-30:2 ("You can't drive things out that are ... behind walls and under floors where the sound can't reach them").

Defendants' Response: Not disputed.

68. Dr. Borth testified that ultrasonic signals cannot reach the places where critters locate their nests inside peoples' houses. Kopel Decl. Ex. 7, Borth Dep. at 268:5-11 ("Q: So [insects] prefer to nest in a place with harborage; correct? A: Well, cockroaches and ants do, which are the case here. Q: And those are areas where the Bell + Howell repellers cannot reach; correct? A: Ultrasound cannot reach them").

Defendants' Response: Disputed. Plaintiffs' statement mischaracterizes Dr. Borth's testimony. Dr. Borth testified that the use of harborages was a flaw in Dr. Potter's testing. See Borth Dep. at pp 266:19-269:9.

69. Dr. Whitford agreed that lay consumers cannot readily understand the limitations of ultrasound:

Q: Well, if I turn on a stereo and listen to a rock album, does the sound of the rock album permeate the entire room, or does it only go in a straight line?

A: It tends to permeate the whole room.

Q: But ultrasonic sound does not, correct?

A: Correct.

Q: And you think that average lay person consumers know the distinction between those two types of sounds?

A: Perhaps not.

Kopel Decl. Ex. 5, Whitford Dep. at 149:11-150:1.

Defendants' Response: Disputed. Plaintiffs' statement mischaracterizes Dr. Whitford's testimony. Dr. Whitford testified that he did not know if the "average lay person" would now if ultrasound is "unidirectional." See Whitford Dep. at 146:8-10. Further, Plaintiffs' statement is an opinion not supported by the evidence.

70. Dr. Borth testified that he has not seen evidence that the Bell + Howell ultrasonic pest repellers are capable of pest control inside of a residential environment. Kopel Decl. Ex. 7, Borth Dep. at 43:12-51:24 (“Q: Have you seen evidence that the Bell + Howell ultrasonic pest repellers are capable of pest control inside of a residential environment? ... A: No.”).

Defendants’ Response: Disputed. Plaintiffs’ statement mischaracterizes Dr. Borth’s testimony. Dr. Borth testified that he has not seen any tests the Bell + Howell device was activated in a room with a bed, carpeting, or furniture. Dr. Borth testified that it is his opinion that the Bell + Howell devices are effective at repelling pests to the extent that the sound waves reach. The efficacy of the product is limited to the placement of the product by the consumer. See Borth Dep. at 297:18-299:9.

71. Dr. Borth testified that he has not seen evidence that the Bell + Howell Ultrasonic pest repellers are capable of driving pests out of a house. Kopel Decl. Ex. 7, Borth Dep. 43:12-51:24 (“Q: Now, have you seen evidence that the Bell + Howell Ultrasonic pest repellers are capable of driving pests out of a house? A: No”).

Defendants’ Response: Disputed. Plaintiffs’ statement mischaracterizes Dr. Borth’s testimony. Dr. Borth testified that the Bell + Howell devices are effective at repelling pests to the extent that sound waves reach. The efficacy of the product is limited to the placement of the product by the consumer. See Borth Dep. at 297:18-299:9.

72. Dr. Borth testified that he has not seen reliable evidence that the Bell + Howell ultrasonic pest repellers are capable of driving pests out of a living space. Kopel Decl. Ex. 7, Borth Dep. 43:12-51:24 (“Q: Have you seen reliable evidence that the Bell + Howell ultrasonic pest repellers are capable of driving pests out of a living space? A: No.”).

Defendants' Response: Disputed. Plaintiffs' statement mischaracterizes Dr. Borth's testimony. Dr. Borth testified that the Bell + Howell devices are effective at repelling pests to the extent that sound waves reach. The efficacy of the product is limited to the placement of the product by the consumer. See Borth Dep. at 297:18-299:9.

73. Dr. Borth testified that he has not seen evidence that the ... Bell + Howell ultrasonic pest repellers are capable of being effective beyond a period of nine days. Kopel Decl. Ex. 7, Borth Dep. 43:12-51:24 ("Q: Have you seen evidence that the ... Bell + Howell ultrasonic pest repellers are capable of being effective beyond a period of nine days? ... A: I have not.").

Defendants' Response:

74. Dr. Borth testified that he has not seen reliable evidence that the Bell + Howell ultrasonic pest repellers are capable of repelling pests in a carpeted room. Kopel Decl. Ex. 7, Borth Dep. 43:12-51:24 ("Q: Have you seen reliable evidence that the Bell + Howell ultrasonic pest repellers are capable of repelling pests in a carpeted room? A: No.").

Defendants' Response: Disputed. Plaintiffs' statement mischaracterizes Dr. Borth's testimony. Dr. Borth testified that he has not seen any tests the Bell + Howell device was activated in a room with a bed, carpeting, or furniture. Dr. Borth testified that it is his opinion that the Bell + Howell devices are effective at repelling pests to the extent that the sound waves reach. The efficacy of the product is limited to the placement of the product by the consumer. See Borth Dep. at 297:18-299:9.

75. Dr. Borth testified that he has not seen reliable evidence that the Bell + Howell ultrasonic pest repellers are capable of repelling pests in a room with furniture in it. Kopel Decl. Ex. 7, Borth Dep. 43:12-51:24 ("Q: Have you seen reliable evidence that the Bell + Howell ultrasonic pest repellers are capable of repelling pests in a room with furniture in it? A: No.").

Defendants' Response: Disputed. Plaintiffs' statement mischaracterizes Dr. Borth's testimony. Dr. Borth testified that he has not seen any tests the Bell + Howell device was activated in a room with a bed, carpeting, or furniture. Dr. Borth testified that it is his opinion that the Bell + Howell devices are effective at repelling pests to the extent that the sound waves reach. The efficacy of the product is limited to the placement of the product by the consumer. See Borth Dep. at 297:18-299:9.

76. Dr. Borth testified that he has not seen reliable evidence that the Bell + Howell ultrasonic pest repellers are capable of repelling pests in a room with a bed in it. Kopel Decl. Ex. 7, Borth Dep. 43:12-51:24 ("Q: Have you seen reliable evidence that the Bell + Howell ultrasonic pest repellers are capable of repelling pests in a room with a bed in it? A: No.").

Defendants' Response: Disputed. Plaintiffs' statement mischaracterizes Dr. Borth's testimony. Dr. Borth testified that he has not seen any tests the Bell + Howell device was activated in a room with a bed, carpeting, or furniture. Dr. Borth testified that it is his opinion that the Bell + Howell devices are effective at repelling pests to the extent that the sound waves reach. The efficacy of the product is limited to the placement of the product by the consumer. See Borth Dep. at 297:18-299:9.

77. Dr. Whitford testified that he has not seen anything from the Chinese Studies to imply that the repellers are capable of driving these pests out of the house. Kopel Decl. Ex. 5, Whitford Dep. at 226:22-227:9 ("Q: Have you seen anything from this test to imply that the repellers are capable of driving these pests out of the house? A: The test only covers ... a 32 square foot area. How can you answer that larger question on the basis of that small of a sample?").

Defendants' response: Disputed. Plaintiffs' statement mischaracterizes Dr. Whitford's testimony. Dr. Whitford testified that ultrasonic waves are effective over the distances specified. See Whitford Dep. at 227:200-227:21.

78. Defendants' expert, Dr. Borth, testified that he would not have relied solely on the Chinese studies in making a determination that the product would be effective inside peoples' residences:

Q: In the course of your work at Dow, would you have relied on the ... Chinese studies that we just discussed in making a determination that the product would be effective inside people's residences?

A: I would not have relied on those studies solely to fulfill my obligation to Dow.

Q: Why not?

A: Because they are – well, for the reasons we pointed out. They ... could have been done better. They could have been – or else you have to have other tests that are done, replicated, there's a control, the species [is specified].

Q: Would the totality of the data you've seen on the effectiveness of the Bell + Howell repellents ... have been sufficient for you to commercialize this product for use in residences with Dow?

...

A: No.

Kopel Decl. Ex. 7, Borth Dep. at 179:17-182:18.

Q: Would you have relied on a test like this in the course of your work at Dow?

A: No.

Q: Why not?

A: Too many unanswered questions.

Q: So why are you more comfortable in the course of your work here relying on it?

A: Because the – I – because I’ve worked in Dow Chemical. I know the rigor with which they require their data to be used and analyzed. I don’t know the rigor from [the] Bell + Howell case – or the Bell + Howell culture.

Kopel Decl. Ex. 7, Borth Dep. at 146:23-147:10.

Defendants’ response: Disputed. Plaintiffs’ statement mischaracterizes Dr. Borth’s testimony. Dr. Borth testified that the results of the Chinese Studies would likely not have been used to commercialize a product at Dow Chemical. Plaintiffs’ statement is an opinion and is not supported by the evidence in this case. Plaintiffs’ statement ignores that businesses, such as Dow Chemical, operate differently and have different criteria for commercializing products. See Borth Dep. at 146:23-147:10.

79. Defendants’ expert, Dr. Borth, testified that the Chinese Studies commissioned by Defendants could not withstand the scrutiny of peer review:

Q: Do you believe that if submitted for publication in a peer-reviewed journal, the Chinese studies conducted on the Bell + Howell repellants would be potentially selected for publication?

A: No ...

Kopel Decl. Ex. 7, Borth Dep. at 309:19-310:4.

Defendants’ Response: Disputed. Plaintiffs’ statement mischaracterizes Dr. Borth’s testimony. Dr. Borth testified that it was not the purpose of the Chinese studies to achieve peer review. See Borth Dep. at pp 310:4-310:6.

80. Defendants’ experts testified that the protocols for the Chinese Studies were written by inexperienced people. *See* Kopel Decl. Ex. 7, Borth Dep. at 99:2-6 (“Q: Okay, does that make you question the competence of the people running this report ...? A: It tells me that they were inexperienced in protocol design.”); Kopel Decl. Ex. 5, Whitford Dep. at 242:22-23 (“I would say [the design] shows a lack of knowledge about the behavior of animals”).

Defendants' Response: **Disputed.** Plaintiffs' statement mischaracterizes Dr. Borth and Dr. Whitford's testimony. Dr. Borth testified that based on the protocols and reports, the data were "raw observations" and Dr. Borth was not concerned with their qualifications. See Borth Dep. at 77:14-78:8. Dr. Whitford testified that he did not know the qualifications of the designers, but surmised they had some qualifications in design as the tests were valid. See Whitford Dep. at pp. 200:7-20.

81. Ultrasonic pest repellers operate by producing high-frequency sound waves (>20 kHz) that are inaudible to humans but detectable by some animals including rodents. Kopel Decl. Ex. 2, Potter Report ¶ 13.

Defendants' Response: **Not disputed.**

82. Most ultrasonic devices generate amplitude/intensity/sound pressure levels in the 70-140 dB range as measured 12 inches from the transducer. Kopel Decl. Ex. 2, Potter Report ¶ 13.

Defendants' Response: **Not disputed.**

83. Ms. Feuerstein testified that the Bell + Howell pest repellers emit frequencies of "40 kilohertz and plus/minus about five kilohertz. So it's a range." Kopel Decl. Ex. 8, Feuerstein Dep. at 45:10-13.

Defendants' Response: **Not disputed.**

84. The fundamental parameters that researchers use to characterize ultrasonic output are frequency and amplitude. Kopel Decl. Ex. 2, Potter Report ¶ 15.

Defendants' Response: **Not disputed.**

85. Similar to sound audible to humans, ultrasonic sound consists of waves of a certain 'frequency' (the number of oscillating waves produced per second) and 'amplitude' (wave strength or intensity). Kopel Decl. Ex. 2, Potter Report ¶ 15; *see also* Kopel Decl. Ex. 3, Borth Report at 6 ("the

two variables of most interest and consequence when testing and discussing the results of ultrasonic sound on insects are ‘loudness’ of the sound, as measured in decibels (dB) and ‘frequency’ of the sound, as measured in kilohertz.”); Kopel Decl. Ex. 5, Whitford Dep. at 201:16-18 (“As long as the frequencies are the same and the decibel levels are the same, I see no difference ...”); *see also* Kopel Decl. Ex. 3, Borth Report at 7; Kopel Decl. Ex. 4, Whitford Rebuttal Report at 11; Kopel Decl. Ex. 5, Whitford Dep. at 51:11-21; Kopel Decl. Ex. 6, Borth B&D Dep. at 142:20-143:4.

Defendants’ Response: Not disputed.

86. Knowing the frequency (measured in kilohertz) and amplitude (measured in decibels) of a device allows inferences to be made from studies with other devices having similar sound characteristics. If the acoustical properties of the devices are substantively the same, it matters little whether they are sold by different companies, or have different packaging, peripherals or cosmetics (e.g., extra outlets or nightlights). Kopel Decl. Ex. 2, Potter Report ¶ 15.

Defendants’ Response: Disputed. Plaintiffs’ statement is an opinion not supported by the evidence in this case.

87. Dr. Borth testified that “so long as an unknown model would prove that the frequency peak is the same as the reference, [he] would expect the results in a biological test to be not significantly different” regardless of “the shape of a given device or a difference in the manufacturing process.” Kopel Decl. Ex. 6, Borth B&D Dep. at 144:14-145:16.

Defendants’ Response: Defendants do not disputed Dr. Borth’s testimony. Defendants object to the admissibility of Dr. Borth’s testimony as it was taken during discovery of an unrelated matter.

88. Dr. Whitford testified that the casing material for an ultrasonic device does not make a difference with regards to efficacy. Kopel Decl. Ex. 5, Whitford Dep. 55:12-56:23 (“Q: Is that an issue? A: Not to the best of my knowledge.”).

Defendants’ Response: Plaintiffs’ statement mischaracterizes Dr. Whitford’s testimony. Dr. Whitford testified that product materials do not make a difference, but testified that product technology has been significantly improved since the ultrasonic pest repellers have been introduced to the consumer market. See Whitford Dep. 55:22-56:23.

89. Dr. Whitford testified that speaker size for an ultrasonic device does not make a difference with regards to efficacy. Kopel Decl. Ex. 5, Whitford Dep. 55:12-56:23 (“Q: Does that make a difference? A: Not if the decibel levels and frequency correspond.”).

Defendants’ Response: Plaintiffs’ statement mischaracterizes Dr. Whitford’s testimony. Dr. Whitford testified that product materials do not make a difference, but testified that product technology has been significantly improved since the ultrasonic pest repellers have been introduced to the consumer market. See Whitford Dep. 55:22-56:23.

90. Defendants’ experts relied on efficacy results of other devices to render an opinion regarding Bell + Howell devices when they had frequency and decibels within the same general range levels. *See* Kopel Decl. Ex. 3, Borth Report at 7 (relying on testing of other devices where “they measured the speaker output of the ultrasonic device they were testing at 60db-68.5 db and the frequency to sweep between 30 kHz – 65 kHz. When we compare their measurements ... we find that the B+H unit is ‘louder’ at 73.6 +/- 2.11 db, on average, and within the same frequency range at 44.8 +/- 1.30 kHz on average.”); Kopel Decl. Ex. 4, Whitford Rebuttal Report at 11 (claiming that the sounds produced by B+H UPRs are comparable to those of the Transonic Pro repellers” which “produce[] sounds form 3-45 kHz, at up to 90 db.”).

Defendants' Response: Plaintiffs' statement mischaracterizes Dr. Borth's report as written.

91. Defendants' experts also relied on tests without knowing the specifics of the devices' variability and stated that doing so was proper. *See* Kopel Decl. Ex. 7, Borth Dep. at 81:6-9 ("Q: Would you be comfortable extending the data from this test to models that do not have sweeping frequencies? A: I believe that the basics of ultrasonic technology are going to give you the results that you have ... under these conditions whether it is sweeping frequency or not."); *id.* Ex. 5, Whitford Dep. at 61:22-62:8 ("Q: ... [I]s that a consideration that needs to be made in determining whether or not the Transonic Pro study is translatable to the Bell + Howell devices, whether or not the Transonic Pro settings added a single state, pulsating, sweeping, et cetera? A: I don't see that it matters").

Defendants' Response: Plaintiffs' statement is an opinion that is not supported by the evidence in this case.

92. In order to independently ascertain the ultrasonic and electromagnetic properties of the Bell + Howell devices, Plaintiffs commissioned the testing of two representative Bell + Howell devices by Dr. Richard Mankin, Research Entomologist with the U.S. Department of Agriculture, Agricultural Research Service, Gainesville, FL. Kopel Decl. Ex. 2, Potter Report ¶ 20.

Defendants' Response: Defendants do not dispute that Plaintiffs' retained Dr. Richard Mankin, Research Entomologist with the U.S. Department of Agriculture, Agricultural Research Service, Gainesville, FL. Defendants object to Plaintiffs' statements and reliance regarding product testing, results or opinions held by Dr. Richard Mankin with regard to the products at issue. Plaintiffs' have designated Dr. Richard Mankin as a non-testifying expert subject to FRCP 26(b)(4)(D). Dr. Richard Mankin's statements have not been subject to cross-examination by the Defendants. Defendants also object to any statements relating to electromagnetic properties as that is not an issue in this case.

93. Dr. Mankin evaluated Ultrasonic Pest Repeller model #50167, and electromagnetic/Ultrasonic Pest Repeller model #50153. Kopel Decl. Ex. 2, Potter Report ¶ 20.

Defendants' Response: Defendants do not dispute that Plaintiffs' retained Dr. Richard Mankin, Research Entomologist with the U.S. Department of Agriculture, Agricultural Research Service, Gainesville, FL. Defendants object to Plaintiffs' statements and reliance regarding product testing, results or opinions held by Dr. Richard Mankin with regard to the products at issue. Plaintiffs' have designated Dr. Richard Mankin as a non-testifying expert subject to FRCP 26(b)(4)(D). Dr. Richard Mankin's statements have not been subject to cross-examination by the Defendants.

94. Dr. Mankin's testing found that peak frequencies measured at a distance of 3 feet from Ultrasonic Repeller model #50167 ranged from 40.11 to 39.83 kHz (analysis of three different units), versus 37.50 to 36.14 kHz for Electromagnetic/Ultrasonic Repeller model #50153 (analysis of four different units). Kopel Decl. Ex. 2, Potter Report ¶ 22.

Defendants' Response: Defendants do not dispute that Plaintiffs' retained Dr. Richard Mankin, Research Entomologist with the U.S. Department of Agriculture, Agricultural Research Service, Gainesville, FL. Defendants object to Plaintiffs' statements and reliance regarding product testing, results or opinions held by Dr. Richard Mankin with regard to the products at issue. Plaintiffs' have designated Dr. Richard Mankin as a non-testifying expert subject to FRCP 26(b)(4)(D). Dr. Richard Mankin's statements have not been subject to cross-examination by the Defendants.

95. Dr. Mankin's testing found that sound pressure levels/amplitude of the respective devices ranged from 89.43 to 87.58 for model #50167, versus 99.30 to 96.21 for model #50153. Kopel Decl. Ex. 2, Potter Report ¶ 22.

Defendants' Response: Defendants do not dispute that Plaintiffs' retained Dr. Richard Mankin, Research Entomologist with the U.S. Department of Agriculture, Agricultural Research Service, Gainesville, FL. Defendants object to Plaintiffs' statements and reliance regarding product testing, results or opinions held by Dr. Richard Mankin with regard to the products at issue. Plaintiffs' have designated Dr. Richard Mankin as a non-testifying expert subject to FRCP 26(b)(4)(D). Dr. Richard Mankin's statements have not been subject to cross-examination by the Defendants.

96. The frequency and amplitude measurements found by Dr. Mankin are similar to those reflected in Defendants' documents. *See* Kopel Decl. Ex. 28 (Bates No. BHH,LLC002959).

Defendants' Response: Defendants do not dispute that Plaintiffs' retained Dr. Richard Mankin, Research Entomologist with the U.S. Department of Agriculture, Agricultural Research Service, Gainesville, FL. Defendants object to Plaintiffs' statements and reliance regarding product testing, results or opinions held by Dr. Richard Mankin with regard to the products at issue. Plaintiffs' have designated Dr. Richard Mankin as a non-testifying expert subject to FRCP 26(b)(4)(D). Dr. Richard Mankin's statements have not been subject to cross-examination by the Defendants.

97. Dr. Mankin's evaluation also found that sound output was static for Electromagnetic/Ultrasonic model #50153, whereas Ultrasonic model #50167 had a sweep frequency cycle varying from 55 kHz down to 38 kHz. Kopel Decl. Ex. 2, Potter Report ¶ 23.

Defendants' Response: Defendants do not dispute that Plaintiffs' retained Dr. Richard Mankin, Research Entomologist with the U.S. Department of Agriculture, Agricultural Research Service, Gainesville, FL. Defendants object to Plaintiffs' statements and reliance regarding product testing, results or opinions held by Dr. Richard Mankin with regard to the products at

issue. Plaintiffs' have designated Dr. Richard Mankin as a non-testifying expert subject to FRCP 26(b)(4)(D). Dr. Richard Mankin's statements have not been subject to cross-examination by the Defendants.

98. Dr. Mankin's evaluation also found that for both repellers, amplitude of the sound signal dropped appreciably on the other side of a ½ inch-thick corkboard panel placed 3 feet from the device (respective mean reductions of 26 dB and 18 dB for models 50153 and 50167). Kopel Decl. Ex. 2, Potter Report ¶ 24.

Defendants' Response: Defendants do not dispute that Plaintiffs' retained Dr. Richard Mankin, Research Entomologist with the U.S. Department of Agriculture, Agricultural Research Service, Gainesville, FL. Defendants object to Plaintiffs' statements and reliance regarding product testing, results or opinions held by Dr. Richard Mankin with regard to the products at issue. Plaintiffs' have designated Dr. Richard Mankin as a non-testifying expert subject to FRCP 26(b)(4)(D). Dr. Richard Mankin's statements have not been subject to cross-examination by the Defendants.

99. Dr. Mankin also evaluated electromagnetic wave impulses for the Bell + Howell dual pest repeller model #50153. Dr. Mankin's evaluation found that electromagnetic output of the repeller was minimal, and not detectable at three or more inches from the device. The reading for the repeller was weaker than that of the fluorescent light bulb at the same distance. Kopel Decl. Ex. 2, Potter Report ¶ 25.

Defendants' Response: Defendants do not dispute that Plaintiffs' retained Dr. Richard Mankin, Research Entomologist with the U.S. Department of Agriculture, Agricultural Research Service, Gainesville, FL. Defendants object to Plaintiffs' statements and reliance regarding product testing, results or opinions held by Dr. Richard Mankin with regard to the products at

issue. Plaintiffs' have designated Dr. Richard Mankin as a non-testifying expert subject to FRCP 26(b)(4)(D). Dr. Richard Mankin's statements have not been subject to cross-examination by the Defendants. Defendants also object to any statements relating to electromagnetic properties as that is not an issue in this case.

100. Plaintiffs commissioned a series of tests of the Bell + Howell Ultrasonic Pest Repler model # 50167 on German cockroaches, *Blattella germanica*; odorous house ants, *Tapinoma sessile*; and cellar spiders, *Achaearanea tepidariorum*. The tests were performed by i2L Research USA, Baltimore, MD (the "Insect Tests"). Kopel Decl. Ex. 2, Potter Report ¶ 27-29; *See also* Ex. 15, Insect Tests.

Defendants' Response: Defendants do not dispute that Plaintiffs' retained i2L Research USA, Baltimore, MD. Defendants object to Plaintiffs' statements and reliance regarding product testing, results or opinions held by i2L Research with regard to the products at issue. Plaintiffs' have designated i2L Research and its employees as a non-testifying experts subject to FRCP 26(b)(4)(D). i2L Research and its employees' statements have not been subject to cross-examination by the Defendants.

101. The protocols for the Insect Tests were designed by Dr. Potter. Kopel Decl. Ex. 2, Potter Report ¶ 27.

Defendants' Response: Disputed. Plaintiffs' statement mischaracterizes Dr. Potter's report. Said testing protocols were designed by Dr. Potter in conjunction with i2L Research USA.

102. The Insect Tests were conducted in paired plywood enclosures with a Plexiglass front (3x3x3 ft. total dimension). Kopel Decl. Ex. 2, Potter Report ¶ 30.

Defendants' Response: Defendants do not dispute that i2L Research conducted insect tests and issued written reports. Defendants object to Plaintiffs' statements and reliance regarding product testing, results or opinions held by i2L Research with regard to the products at issue.

Plaintiffs' have designated i2L Research and its employees as a non-testifying experts subject to FRCP 26(b)(4)(D). i2L Research and its employees' statements have not been subject to cross-examination by the Defendants.

103. In the Insect Tests, treated enclosures were outfitted with a repeller mounted to the top-center of one side, with the speaker facing downward (i2L Efficacy Report, Figures 1-2). The other side contained no repeller. Kopel Decl. Ex. 2, Potter Report ¶ 30.

Defendants' Response: Defendants do not dispute that i2L Research conducted insect tests and issued written reports. Defendants object to Plaintiffs' statements and reliance regarding product testing, results or opinions held by i2L Research with regard to the products at issue. Plaintiffs' have designated i2L Research and its employees as a non-testifying experts subject to FRCP 26(b)(4)(D). i2L Research and its employees' statements have not been subject to cross-examination by the Defendants.

104. In the Insect Tests, three paired enclosures armed with a repeller served as treatments, while three similar setups without a repeller served as untreated controls. Kopel Decl. Ex. 2, Potter Report ¶ 30.

Defendants' Response: Defendants do not dispute that i2L Research conducted insect tests and issued written reports. Defendants object to Plaintiffs' statements and reliance regarding product testing, results or opinions held by i2L Research with regard to the products at issue. Plaintiffs' have designated i2L Research and its employees as a non-testifying experts subject to FRCP 26(b)(4)(D). i2L Research and its employees' statements have not been subject to cross-examination by the Defendants.

105. In the testing of cockroaches, after 10 days of constant, ‘point-blank’ exposure, only 13% of cockroaches overall were found on the opposite, untreated side of the enclosure. Kopel Decl. Ex. 2, Potter Report ¶ 34.

Defendants’ Response: Defendants do not dispute that i2L Research conducted insect tests and issued written reports. Defendants object to Plaintiffs’ statements and reliance regarding product testing, results or opinions held by i2L Research with regard to the products at issue. Plaintiffs’ have designated i2L Research and its employees as a non-testifying experts subject to FRCP 26(b)(4)(D). i2L Research and its employees’ statements have not been subject to cross-examination by the Defendants.

106. Minimal directional movement away from the repeller occurred with spiders. The greatest movement to the non-repeller side relative to the untreated control occurred on day 3 (only 6.8%). By day 6, net movement of spiders away from the repeller side was zero. Kopel Decl. Ex. 2, Potter Report ¶ 35.

Defendants’ Response: Defendants do not dispute that i2L Research conducted insect tests and issued written reports. Defendants object to Plaintiffs’ statements and reliance regarding product testing, results or opinions held by i2L Research with regard to the products at issue. Plaintiffs’ have designated i2L Research and its employees as a non-testifying experts subject to FRCP 26(b)(4)(D). i2L Research and its employees’ statements have not been subject to cross-examination by the Defendants.

107. After 7 days of continuous exposure, not a single ant was found on the non-repeller side of the enclosure. Kopel Decl. Ex. 2, Potter Report ¶ 36.

Defendants’ Response: Defendants do not dispute that i2L Research conducted insect tests and issued written reports. Defendants object to Plaintiffs’ statements and reliance regarding

product testing, results or opinions held by i2L Research with regard to the products at issue. Plaintiffs' have designated i2L Research and its employees as a non-testifying experts subject to FRCP 26(b)(4)(D). i2L Research and its employees' statements have not been subject to cross-examination by the Defendants.

108. Based on these results in the Insect Tests, investigators concluded that "the Bell+Howell Repeller #50167 ultrasonic device was not effective at repelling cockroaches, spiders, or ants during the trial duration." Kopel Decl. Ex. 2, Potter Report ¶ 37.

Defendants' Response: Defendants do not dispute that i2L Research conducted insect tests and issued written reports. Defendants object to Plaintiffs' statements and reliance regarding product testing, results or opinions held by i2L Research with regard to the products at issue. Plaintiffs' have designated i2L Research and its employees as a non-testifying experts subject to FRCP 26(b)(4)(D). i2L Research and its employees' statements have not been subject to cross-examination by the Defendants.

109. Plaintiffs commissioned a series of tests of the Bell + Howell Ultrasonic Pest Repeller model # 50167 on house mouse, *Mus musculus* (the "Rodent Tests"). The tests were performed by Sierra Research Laboratories, Modesto, CA., based on a protocol co-designed by Dr. Potter. Kopel Decl. Ex. 2, Potter Report ¶¶ 27 & 38; *See also* Ex. 46, Rodent Tests.

Defendants' Response: Defendants do not dispute that Sierra Research conducted rodent tests and issued written reports. Defendants object to Plaintiffs' statements and reliance regarding product testing, results or opinions held by Sierra with regard to the products at issue. Plaintiffs' have designated Sierra and its employees as a non-testifying experts subject to FRCP 26(b)(4)(D). Sierra and its employees' statements have not been subject to cross-examination by the Defendants

110. The Rodent Tests were conducted in six vacant apartments in Modesto, CA. The apartments were divided into two groups of three apartments: untreated control apartments (no repellents) and treated apartments with B&H Ultrasonic Pest Repeller # 50167 activated. Kopel Decl. Ex. 2, Potter Report ¶ 40.

Defendants' Response: Defendants do not dispute that Sierra Research conducted rodent tests and issued written reports. Defendants object to Plaintiffs' statements and reliance regarding product testing, results or opinions held by Sierra with regard to the products at issue. Plaintiffs' have designated Sierra and its employees as a non-testifying experts subject to FRCP 26(b)(4)(D). Sierra and its employees' statements have not been subject to cross-examination by the Defendants

111. In the Rodent Tests, two Bell + Howell ultrasonic pest repellents were plugged into the wall sockets in the front room of each treated apartment, while no repeller was placed in the back room. Kopel Decl. Ex. 2, Potter Report ¶ 43.

Defendants' Response: Defendants do not dispute that Sierra Research conducted rodent tests and issued written reports. Defendants object to Plaintiffs' statements and reliance regarding product testing, results or opinions held by Sierra with regard to the products at issue. Plaintiffs' have designated Sierra and its employees as a non-testifying experts subject to FRCP 26(b)(4)(D). Sierra and its employees' statements have not been subject to cross-examination by the Defendants

112. In the Rodent Tests, no repellents were plugged into the wall sockets at all in the untreated (control) apartments. Kopel Decl. Ex. 2, Potter Report ¶ 43.

Defendants' Response: Defendants do not dispute that Sierra Research conducted rodent tests and issued written reports. Defendants object to Plaintiffs' statements and reliance regarding

product testing, results or opinions held by Sierra with regard to the products at issue. Plaintiffs' have designated Sierra and its employees as a non-testifying experts subject to FRCP 26(b)(4)(D). Sierra and its employees' statements have not been subject to cross-examination by the Defendants

113. At the outset of the Rodent Tests, 12 mice were released into the front room of each apartment and allowed to acclimate for one week. Kopel Decl. Ex. 2, Potter Report ¶ 44.

Defendants' Response: Defendants do not dispute that Sierra Research conducted rodent tests and issued written reports. Defendants object to Plaintiffs' statements and reliance regarding product testing, results or opinions held by Sierra with regard to the products at issue. Plaintiffs' have designated Sierra and its employees as a non-testifying experts subject to FRCP 26(b)(4)(D). Sierra and its employees' statements have not been subject to cross-examination by the Defendants

114. Following the acclimation period, the repellents were turned on and the back-room doors were cracked open approximately 1" to allow the mice access to the "escape area" in the back room where there was no repeller. Kopel Decl. Ex. 2, Potter Report ¶ 44.

Defendants' Response: Defendants do not dispute that Sierra Research conducted rodent tests and issued written reports. Defendants object to Plaintiffs' statements and reliance regarding product testing, results or opinions held by Sierra with regard to the products at issue. Plaintiffs' have designated Sierra and its employees as a non-testifying experts subject to FRCP 26(b)(4)(D). Sierra and its employees' statements have not been subject to cross-examination by the Defendants

115. The Rodent Tests observed the movements of the mice for a 14-day period while the repellents were activated (in the treated apartments). Potter Report ¶ 45.

Defendants' Response: Defendants do not dispute that Sierra Research conducted rodent tests and issued written reports. Defendants object to Plaintiffs' statements and reliance regarding product testing, results or opinions held by Sierra with regard to the products at issue. Plaintiffs' have designated Sierra and its employees as a non-testifying experts subject to FRCP 26(b)(4)(D). Sierra and its employees' statements have not been subject to cross-examination by the Defendants

116. For the untreated control apartments in the Rodent Tests, the distribution of mice was approximately 50:50 between front and back rooms over the 14-days of the evaluation. Kopel Decl. Ex. 2, Potter Report ¶ 48.

Defendants' Response: Defendants do not dispute that Sierra Research conducted rodent tests and issued written reports. Defendants object to Plaintiffs' statements and reliance regarding product testing, results or opinions held by Sierra with regard to the products at issue. Plaintiffs' have designated Sierra and its employees as a non-testifying experts subject to FRCP 26(b)(4)(D). Sierra and its employees' statements have not been subject to cross-examination by the Defendants

117. For the treated apartments (with the repellents) in the Rodent Tests, the visual mouse counts initially indicated about 70% of the mice in the back room and about 30% in the front room where the two repellents were plugged into wall sockets. For the first 5 days the mouse distribution remained unequal, but began to equilibrate from day 5 through day 14 to about a 50:50 distribution as was observed in the untreated control units. Kopel Decl. Ex. 2, Potter Report ¶ 48.

Defendants' Response: Defendants do not dispute that Sierra Research conducted rodent tests and issued written reports. Defendants object to Plaintiffs' statements and reliance regarding product testing, results or opinions held by Sierra with regard to the products at issue.

Plaintiffs' have designated Sierra and its employees as a non-testifying experts subject to FRCP 26(b)(4)(D). Sierra and its employees' statements have not been subject to cross-examination by the Defendants

118. This distribution suggested the Bell + Howell Ultrasonic Pest Repellers were influencing mouse distribution for the first week of the evaluation, but not in the second week, a finding supported by statistical analysis of the data. Kopel Decl. Ex. 2, Potter Report ¶ 48.

Defendants' Response: Defendants do not dispute that Sierra Research conducted rodent tests and issued written reports. Defendants object to Plaintiffs' statements and reliance regarding product testing, results or opinions held by Sierra with regard to the products at issue. Plaintiffs' have designated Sierra and its employees as a non-testifying experts subject to FRCP 26(b)(4)(D). Sierra and its employees' statements have not been subject to cross-examination by the Defendants

119. Several images captured mice investigating the Bell + Howell Ultrasonic Pest Repellers and at least one image showed a mouse sitting on top of the repeller plugged into the wall:



See Kopel Decl. ¶ 56.

Defendants' Response: Defendants do not dispute that Sierra Research conducted rodent tests and issued written reports. Defendants object to Plaintiffs' statements and reliance regarding product testing, results or opinions held by Sierra with regard to the products at issue. Plaintiffs' have designated Sierra and its employees as a non-testifying experts subject to FRCP 26(b)(4)(D). Sierra and its employees' statements have not been subject to cross-examination by the Defendants, nor can they be called upon to authenticate or explain the above images.

120. The investigators in the Rodent Tests concluded that while the Bell + Howell Ultrasonic Pest Repellers had a slight initial effect on house mouse distribution, by the second week just as many mice were observed in rooms with devices as without. Kopel Decl. Ex. 2, Potter Report ¶ 51.

Defendants' Response: Defendants do not dispute that Sierra Research conducted rodent tests and issued written reports. Defendants object to Plaintiffs' statements and reliance regarding product testing, results or opinions held by Sierra with regard to the products at issue. Plaintiffs' have designated Sierra and its employees as a non-testifying experts subject to FRCP 26(b)(4)(D). Sierra and its employees' statements have not been subject to cross-examination by the Defendants

121. Mouse activity in the Rodent Tests (as indicated by presence of droppings, urine, nesting materials, etc.) appeared identical between the treated and untreated apartments demonstrating no discernable differences attributed to the repeller. Kopel Decl. Ex. 2, Potter Report ¶ 51.

Defendants' Response: Defendants do not dispute that Sierra Research conducted rodent tests and issued written reports. Defendants object to Plaintiffs' statements and reliance regarding product testing, results or opinions held by Sierra with regard to the products at issue. Plaintiffs' have designated Sierra and its employees as a non-testifying experts subject to FRCP

26(b)(4)(D). Sierra and its employees' statements have not been subject to cross-examination by the Defendants

122. The findings of the Rodent Tests are consistent with previous scientific research on rodents and ultrasonic devices — any initial aversion to such sounds being temporary, followed by resumption of normal activities. Kopel Decl. Ex. 2, Potter Report ¶ 51.

Defendants' Response: Disputed. Plaintiffs' statement is an opinion that is not supported by the evidence in this case.

123. Peer-reviewed studies testing the effects of ultrasound technology on cockroaches, ants, spiders, mice, and rats, have repeatedly shown a lack of repellency. Kopel Decl. Ex. 2, Potter Report ¶ 53.

Defendants' Response: Disputed. Plaintiffs' statement is an opinion that is not supported by the evidence in this case.

124. **Ballard & Gold (1983):** In choice box experiments, German cockroaches, *Blattella germanica*, exposed to devices with static ultrasonic frequencies of 20, 30, 40, 50, and 60 kHz displayed no behavioral avoidance or repellency. *See* Kopel Decl. Ex. 2, Potter Report ¶ 56; *id.* Ex. 47, Ballard (1983).

Defendants' Response: Defendants do not dispute the existence of the cited article. Defendants object to Plaintiffs' characterization of the article to the extent that it is inconsistent with the article as written. Further, Defendants object to the admissibility of the article and Plaintiffs' reliance on the same. See Defendants' Motion to Preclude Expert Testimony of Plaintiffs' Proffered Expert Witness, Michael F. Potter. Dkt. # 142, at pp. 5-10.

125. **Ballard (1984):** In study with a commercial device producing variable ultrasound (30 to 65 kHz at intervals of 1.8 to 4 times per second), the researchers observed a temporary increase in

cockroach movement, but after one week the roaches were no longer affected leading them to conclude that the effects were biologically unimportant. Kopel Decl. Ex. 2, Potter Report ¶ 56; *id.* Ex. 41, Ballard (1984).

Defendants' Response: Defendants do not dispute the existence of the cited article. Defendants object to Plaintiffs' characterization of the article to the extent that it is inconsistent with the article as written. Further, Defendants object to the admissibility of the article and Plaintiffs' reliance on the same. See Defendants' Motion to Preclude Expert Testimony of Plaintiffs' Proffered Expert Witness, Michael F. Potter. Dkt. # 142, at pp. 5-10.

126. **Gold et al. (1984):** In an investigation conducted at the request of the Federal Trade Commission, this study tested four different brands of ultrasonic devices with different frequencies (20-50 kHz), amplitudes (100-137 dB), and pulse durations (2-14 msec). Conclusions were that manufacturer claims of controlling, repelling, and eliminating cockroaches were unfounded. Kopel Decl. Ex. 2, Potter Report ¶ 57; *id.* Ex. 42, Gold et al. (1984).

Defendants' Response: Defendants do not dispute the existence of the cited article. Defendants object to Plaintiffs' characterization of the article to the extent that it is inconsistent with the article as written. Further, Defendants object to the admissibility of the article and Plaintiffs' reliance on the same. See Defendants' Motion to Preclude Expert Testimony of Plaintiffs' Proffered Expert Witness, Michael F. Potter. Dkt. # 142, at pp. 5-10.

127. In Gold (1984), the researchers also found that output frequency diminished rapidly away from the ultrasonic devices, and that a thin (0.3 cm) piece of cardboard attenuated output by over 60 percent. Kopel Decl. Ex. 2, Potter Report ¶ 57; *id.* Ex. 42, Gold et al. (1984).

Defendants' Response: Defendants do not dispute the existence of the cited article. Defendants object to Plaintiffs' characterization of the article to the extent that it is inconsistent

with the article as written. Further, Defendants object to the admissibility of the article and Plaintiffs' reliance on the same. See Defendants' Motion to Preclude Expert Testimony of Plaintiffs' Proffered Expert Witness, Michael F. Potter. Dkt. # 142, at pp. 5-10.

128. Schreck et al. (1984): Test using paired enclosures evaluated and determined that another commercial ultrasonic device was ineffective in repelling or eliminating German cockroaches, even after 90 continuous hours of operation. Kopel Decl. Ex. 2, Potter Report ¶ 58; *id.* Ex. 48, Schreck et al. (1984).

Defendants' Response: Defendants do not dispute the existence of the cited article. Defendants object to Plaintiffs' characterization of the article to the extent that it is inconsistent with the article as written. Further, Defendants object to the admissibility of the article and Plaintiffs' reliance on the same. See Defendants' Motion to Preclude Expert Testimony of Plaintiffs' Proffered Expert Witness, Michael F. Potter. Dkt. # 142, at pp. 5-10.

129. In Schreck (1984), the device had peak ultrasonic frequencies of 44 and 53 kHz with pulse durations of 7.6 and 14.2 msec, and amplitude of 96 dB at 0.5 meters from the transducer. Kopel Decl. Ex. 2, Potter Report ¶ 58; *id.* Ex. 48, Schreck et al. (1984).

Defendants' Response: Defendants do not dispute the existence of the cited article. Defendants object to Plaintiffs' characterization of the article to the extent that it is inconsistent with the article as written. Further, Defendants object to the admissibility of the article and Plaintiffs' reliance on the same. See Defendants' Motion to Preclude Expert Testimony of Plaintiffs' Proffered Expert Witness, Michael F. Potter. Dkt. # 142, at pp. 5-10.

130. In Schreck (1984), the researchers further concluded that: "There is no reason to expect a different effect on these insects if they were exposed to other ultrasonic devices having similar frequency outputs." Kopel Decl. Ex. 2, Potter Report ¶ 58; *id.* Ex. 48, Schreck et al. (1984).

Defendants' Response: Defendants do not dispute the existence of the cited article. Defendants object to Plaintiffs' characterization of the article to the extent that it is inconsistent with the article as written. Further, Defendants object to the admissibility of the article and Plaintiffs' reliance on the same. See Defendants' Motion to Preclude Expert Testimony of Plaintiffs' Proffered Expert Witness, Michael F. Potter. Dkt. # 142, at pp. 5-10.

131. **Ahmad (2007):** Study evaluated random ultrasonic sound patterns to see if they would improve repellency against mosquitoes and the German cockroach. Ultrasound in the 20-100 kHz frequency, and 91-102 dB amplitude range failed to repel either pest. Kopel Decl. Ex. 2, Potter Report ¶ 59; *id.* Ex. 12, Ahmad (2007).

Defendants' Response: Defendants do not dispute the existence of the cited article. Defendants object to Plaintiffs' characterization of the article to the extent that it is inconsistent with the article as written. Further, Defendants object to the admissibility of the article and Plaintiffs' reliance on the same. See Defendants' Motion to Preclude Expert Testimony of Plaintiffs' Proffered Expert Witness, Michael F. Potter. Dkt. # 142, at pp. 5-10.

132. **Huang and Subramanyam (2006):** Three other ultrasonic devices with varying frequencies and amplitudes (26-34 kHz/ 95 dB; 27-35 kHz/ 92 dB; 28-42 kHz/ 88 dB) were evaluated for their effects on German cockroaches in study which found a lack of repellency to all three devices and concluded that: "Ultrasonic technology could not be used as an effective pest management tool to repel or eliminate the German cockroach." Kopel Decl. Ex. 2, Potter Report ¶ 60; *id.* Ex. 40, Huang and Subramanyam (2006).

Defendants' Response: Defendants do not dispute the existence of the cited article. Defendants object to Plaintiffs' characterization of the article to the extent that it is inconsistent with the article as written. Further, Defendants object to the admissibility of the article and

Plaintiffs' reliance on the same. See Defendants' Motion to Preclude Expert Testimony of Plaintiffs' Proffered Expert Witness, Michael F. Potter. Dkt. # 142, at pp. 5-10.

133. **Koehler (1986):** Study evaluated nine additional commercial ultrasonic devices against German cockroaches in paired unfurnished rooms. Ultrasonic output of the devices varied considerably with most producing two distinct and alternating high frequency sound outputs ranging from 17 to 71 kHz and 51-103 dB. Kopel Decl. Ex. 2, Potter Report ¶ 61; *id.* Ex. 39, Koehler (1986).

Defendants' Response: Defendants do not dispute the existence of the cited article. Defendants object to Plaintiffs' characterization of the article to the extent that it is inconsistent with the article as written. Further, Defendants object to the admissibility of the article and Plaintiffs' reliance on the same. **See Defendants' Motion to Preclude Expert Testimony of Plaintiffs' Proffered Expert Witness, Michael F. Potter. Dkt. # 142, at pp. 5-10.**In Koehler (1986), irrespective of the output characteristics of the device, cockroaches were just as likely to enter a room treated with ultrasound as a similar untreated room. In fact, a numerically greater percentage of cockroaches were found in the ultrasound-treated rooms than the untreated rooms, reinforcing the lack of repellency of the devices. Kopel Decl. Ex. 2, Potter Report ¶ 61; *id.* Ex. 39, Koehler (1986).

Defendants' Response: Defendants do not dispute the existence of the cited article. Defendants object to Plaintiffs' characterization of the article to the extent that it is inconsistent with the article as written. Further, Defendants object to the admissibility of the article and Plaintiffs' reliance on the same. **See Defendants' Motion to Preclude Expert Testimony of Plaintiffs' Proffered Expert Witness, Michael F. Potter. Dkt. # 142, at pp. 5-10.**In Koehler (1986), additional trials by the researchers showed that ultrasound was ineffective in reducing infestations of German cockroaches in occupied apartments. Infested apartments were treated by placing a commercial ultrasonic device in the dining area pointing directly into the kitchen. Additional apartments were left

untreated as controls. Weekly cockroach counts showed no significant decline throughout the 10-week treatment period. By week seven, cockroach numbers had nearly doubled compared to pretreatment levels, and by week 10, tenants were so dissatisfied they wanted the devices removed. Some of the retrieved ultrasonic units were later found to have cockroaches harboring inside the device (presumably attracted to the warmth), underscoring the lack of effectiveness in repelling and controlling cockroaches. Kopel Decl. Ex. 2, Potter Report ¶¶ 61; *id.* Ex. 39, Koehler (1986).

Defendants' Response: Defendants do not dispute the existence of the cited article. Defendants object to Plaintiffs' characterization of the article to the extent that it is inconsistent with the article as written. Further, Defendants object to the admissibility of the article and Plaintiffs' reliance on the same. See Defendants' Motion to Preclude Expert Testimony of Plaintiffs' Proffered Expert Witness, Michael F. Potter. Dkt. # 142, at pp. 5-10.

134. **Gold (1995):** Study showed a lack of success in ridding dwellings of German cockroaches with commercial ultrasonic devices. No significant reductions occurred during a two-week study that they conducted in cockroach-infested dormitories on the campus of Texas A&M University. Kopel Decl. Ex. 2, Potter Report ¶¶ 62; *id.* Ex. 49, Gold (1995).

Defendants' Response: Defendants do not dispute the existence of the cited article. Defendants object to Plaintiffs' characterization of the article to the extent that it is inconsistent with the article as written. Further, Defendants object to the admissibility of the article and Plaintiffs' reliance on the same. See Defendants' Motion to Preclude Expert Testimony of Plaintiffs' Proffered Expert Witness, Michael F. Potter. Dkt. # 142, at pp. 5-10.

135. **Decker et al. (1989):** Study that determined that American cockroaches, another household-infecting species, responded to sound frequencies of 100 to 3200 Hz (within the audible range for humans), but did not respond to sound emitted from 10,000 to 40,000 Hz/10-40 kHz

(ultrasonic ranges) when microelectrodes were inserted into their sensory nervous system. The finding led the researchers to surmise that ultrasound had no potential or utility for controlling cockroaches. Kopel Decl. Ex. 2, Potter Report ¶ 63; *id.* Ex. 50, Decker et al. (1989).

Defendants' Response: Defendants do not dispute the existence of the cited article. Defendants object to Plaintiffs' characterization of the article to the extent that it is inconsistent with the article as written. Further, Defendants object to the admissibility of the article and Plaintiffs' reliance on the same. See Defendants' Motion to Preclude Expert Testimony of Plaintiffs' Proffered Expert Witness, Michael F. Potter. Dkt. # 142, at pp. 5-10.

136. **Huang et al. (2002):** Study conducted laboratory and field trials with three commercial devices with varying frequencies and sound pressure levels (26-34 kHz 95 dB; 27-35 kHz/ 92 dB; 28-42kHz/ 88 dB). Kopel Decl. Ex. 2, Potter Report ¶ 65; *id.* Ex. 13, Huang et al. (2002).

Defendants' Response: Defendants do not dispute the existence of the cited article. Defendants object to Plaintiffs' characterization of the article to the extent that it is inconsistent with the article as written. Further, Defendants object to the admissibility of the article and Plaintiffs' reliance on the same. See Defendants' Motion to Preclude Expert Testimony of Plaintiffs' Proffered Expert Witness, Michael F. Potter. Dkt. # 142, at pp. 5-10.

137. In Huang et al. (2002), colonies of three common species of carpenter and field ants (*Camponotus pennsylvanicus*, *C. festintatus*, *Formica pallidefulva*), were released into paired interconnected enclosures with and without an ultrasonic pest repeller. None of the three species of ants were repelled from enclosures containing active devices. Kopel Decl. Ex. 2, Potter Report ¶ 65; *id.* Ex. 13, Huang et al. (2002).

Defendants' Response: Defendants do not dispute the existence of the cited article. Defendants object to Plaintiffs' characterization of the article to the extent that it is inconsistent

with the article as written. Further, Defendants object to the admissibility of the article and Plaintiffs' reliance on the same. See Defendants' Motion to Preclude Expert Testimony of Plaintiffs' Proffered Expert Witness, Michael F. Potter. Dkt. # 142, at pp. 5-10.

138. In another series of experiments done in the Huang et al. (2002) study, the ultrasonic devices were installed within 2 feet of metal trashcans provisioned with food debris to attract ants. After 10 days of continuous operation, none of the three ultrasonic devices significantly reduced the number of ants foraging on and within the trash containers. Kopel Decl. Ex. 2, Potter Report ¶ 65; *id.* Ex. 13, Huang et al. (2002).

Defendants' Response: Defendants do not dispute the existence of the cited article. Defendants object to Plaintiffs' characterization of the article to the extent that it is inconsistent with the article as written. Further, Defendants object to the admissibility of the article and Plaintiffs' reliance on the same. See Defendants' Motion to Preclude Expert Testimony of Plaintiffs' Proffered Expert Witness, Michael F. Potter. Dkt. # 142, at pp. 5-10.

139. **Subramanyam (2003):** Study observed no effect on movement or repellency when groups of longbodied cellar spiders were introduced into 4x4x4-ft. paired interconnected enclosures with either of two commercial ultrasonic devices with varying frequencies and amplitudes (26-34 kHz/ 95 dB; 28-42 kHz/ 88dB). Kopel Decl. Ex. 2, Potter Report ¶ 67; *id.* Ex. 51, Subramanyam (2003).

Defendants' Response: Defendants do not dispute the existence of the cited article. Defendants object to Plaintiffs' characterization of the article to the extent that it is inconsistent with the article as written. Further, Defendants object to the admissibility of the article and Plaintiffs' reliance on the same. See Defendants' Motion to Preclude Expert Testimony of Plaintiffs' Proffered Expert Witness, Michael F. Potter. Dkt. # 142, at pp. 5-10.

140. **Sprock et al. (1967):** Study conducted a series of laboratory and field experiments with equipment producing sounds in the sonic/ultrasonic range of 1.8-48 kHz and 60-140 dB. To quote the researchers: “In our experiments, ultrasonics did not repel rats and mice from any of the tested areas...Eight years of evaluation of basic principles inherent to the use of acoustical frightening devices produced only negative results. None of the combinations tested will effectively extirpate rodents from a storage building by stimulating their receptors.” Kopel Decl. Ex. 2, Potter Report ¶ 69; *id.* Ex. 9, Sprock et al. (1967).

Defendants’ Response: Defendants do not dispute the existence of the cited article. Defendants object to Plaintiffs’ characterization of the article to the extent that it is inconsistent with the article as written. Further, Defendants object to the admissibility of the article and Plaintiffs’ reliance on the same. See Defendants’ Motion to Preclude Expert Testimony of Plaintiffs’ Proffered Expert Witness, Michael F. Potter. Dkt. # 142, at pp. 5-10.

141. **Lavoie and Glahn (1977):** Study analyzed sound output of five commercial ultrasonic devices claimed to be effective in driving rodents from buildings. Signal frequencies/amplitudes for the devices ranged from 22-50 kHz and 87-112 dB. Kopel Decl. Ex. 2, Potter Report ¶ 70; *id.* Ex. 52, Lavoie and Glahn (1977).

Defendants’ Response: Defendants do not dispute the existence of the cited article. Defendants object to Plaintiffs’ characterization of the article to the extent that it is inconsistent with the article as written. Further, Defendants object to the admissibility of the article and Plaintiffs’ reliance on the same. See Defendants’ Motion to Preclude Expert Testimony of Plaintiffs’ Proffered Expert Witness, Michael F. Potter. Dkt. # 142, at pp. 5-10.

142. In Lavoie and Glahn (1977), two contrasting types of devices were selected for field testing against Norway rats (*Rattus norvegicus*) – one producing a wide band of frequencies (19-50 kHz)

with an amplitude of 87 dB, the other with narrow frequency (22 kHz) but higher amplitude of 112 dB. Twenty rats were introduced into two adjoining rooms in the basement of an unoccupied warehouse, one with and one without the device. Consumption of food was then monitored at several locations within each room over two 3-weeks periods. Rats fed continuously in the presence of both devices, causing the researchers to conclude, “Neither ultrasonic device would be effective in expelling Norway rats from warehouses or preventing them from taking food, even quite close to the sound source.” Kopel Decl. Ex. 2, Potter Report ¶ 70; *id.* Ex. 52, Lavoie and Glahn (1977).

Defendants’ Response: Defendants do not dispute the existence of the cited article. Defendants object to Plaintiffs’ characterization of the article to the extent that it is inconsistent with the article as written. Further, Defendants object to the admissibility of the article and Plaintiffs’ reliance on the same. See Defendants’ Motion to Preclude Expert Testimony of Plaintiffs’ Proffered Expert Witness, Michael F. Potter. Dkt. # 142, at pp. 5-10.

143. **Shumake (1984):** Study evaluated six additional commercial ultrasonic pest repellers in the series of field experiments involving wild Norway rats and field mice. Enclosures ranged in size from 8.9 to 196.5 m² and consisted of metal, wood or brick construction with concrete or earthen floors. Output characteristics of devices included fixed, random and continuous sweep frequencies ranging from 20-100 kHz and intensities/amplitudes of 78-122 dB. Kopel Decl. Ex. 2, Potter Report ¶ 71; *id.* Ex. 53, Schumake (1984).

Defendants’ Response: Defendants do not dispute the existence of the cited article. Defendants object to Plaintiffs’ characterization of the article to the extent that it is inconsistent with the article as written. Further, Defendants object to the admissibility of the article and Plaintiffs’ reliance on the same. See Defendants’ Motion to Preclude Expert Testimony of Plaintiffs’ Proffered Expert Witness, Michael F. Potter. Dkt. # 142, at pp. 5-10.

144. In Shumake (1984), the investigators observed only occasional, temporary repellent effects. “Despite the wide range of decibel levels and frequencies evaluated, strong, sustained repellent effects were never detected...the six devices had insufficient repellency to merit any usefulness in rodent pest control applications, preventive or corrective.” Kopel Decl. Ex. 2, Potter Report ¶ 71; *id.* Ex. 53, Schumake (1984).

Defendants’ Response: Defendants do not dispute the existence of the cited article. Defendants object to Plaintiffs’ characterization of the article to the extent that it is inconsistent with the article as written. Further, Defendants object to the admissibility of the article and Plaintiffs’ reliance on the same. See Defendants’ Motion to Preclude Expert Testimony of Plaintiffs’ Proffered Expert Witness, Michael F. Potter. Dkt. # 142, at pp. 5-10.

145. **Howard and Marsh (1985):** Study evaluating effects of ultrasound on rodents in the late-1950s. In a review 30 years later, scientists W.E. Howard and R.E. Marsh concluded: “It is well established that such (ultrasonic) devices will not exterminate, kill, or drive rodents out of a favorable habitat. At best they may temporarily discourage rodents from visiting areas in buildings that have little cover available...most rats and other rodents quickly became accustomed to any new sound, especially after it has been repeated long enough. Consequently, rats and mice can be found living in grain mills, machine shops, around airports, along major highways, and many other places where the sound frequencies and levels of intensity are highly varied and complex.” Kopel Decl. Ex. 2, Potter Report ¶ 72; *id.* Ex. 10, Howard and Marsh (1985).

Defendants’ Response: Defendants do not dispute the existence of the cited article. Defendants object to Plaintiffs’ characterization of the article to the extent that it is inconsistent with the article as written. Further, Defendants object to the admissibility of the article and

Plaintiffs’ reliance on the same. See Defendants’ Motion to Preclude Expert Testimony of Plaintiffs’ Proffered Expert Witness, Michael F. Potter. Dkt. # 142, at pp. 5-10.

146. **Meehan (1984):** Rentokil, the longest pest control in Europe, evaluated 20 different ultrasonic devices with varying outputs against rats and mice in indoor and outdoor experimental situations as well as in practical field trials. The investigators concluded, “None of the units produced anything more than a partial repellency for a day or so which was overcome, regardless of whether the frequency was variable, random, or intermittent.” Kopel Decl. Ex. 2, Potter Report ¶ 73; *id.* Ex. 11, Meehan (1984).

Defendants’ Response: Defendants do not dispute the existence of the cited article. Defendants object to Plaintiffs’ characterization of the article to the extent that it is inconsistent with the article as written. Further, Defendants object to the admissibility of the article and Plaintiffs’ reliance on the same. See Defendants’ Motion to Preclude Expert Testimony of Plaintiffs’ Proffered Expert Witness, Michael F. Potter. Dkt. # 142, at pp. 5-10.

147. **Lund (1984):** Scientists with the Danish Pest Infestation Laboratory Ministry of Agriculture tested 11 different ultrasonic devices with varying frequencies, amplitudes (100-130dB), and random intervals between emissions. Norway rats were housed in 14 by 14-ft interconnected rooms, each provisioned with food, water and straw for nesting. One of the rooms had a device pointing directly at the feeding tray, while the other room did not. Kopel Decl. Ex. 2, Potter Report ¶ 74; *id.* Ex. 54, Lund (1984).

Defendants’ Response: Defendants do not dispute the existence of the cited article. Defendants object to Plaintiffs’ characterization of the article to the extent that it is inconsistent with the article as written. Further, Defendants object to the admissibility of the article and

Plaintiffs’ reliance on the same. See Defendants’ Motion to Preclude Expert Testimony of Plaintiffs’ Proffered Expert Witness, Michael F. Potter. Dkt. # 142, at pp. 5-10.

148. In Lund (1984), investigators deemed the setup “most favorable from the producer’s (manufacturer) viewpoint, since it was a small area with no obstacles to create sound shadows.” Although in some cases rats were initially disturbed by the sound, they soon became accustomed (within 3 hours of switching on the device), and showed no signs of repellency for the remaining 7 days of the experiment. Kopel Decl. Ex. 2, Potter Report ¶ 74; *id.* Ex. 54, Lund (1984).

Defendants’ Response: Defendants do not dispute the existence of the cited article. Defendants object to Plaintiffs’ characterization of the article to the extent that it is inconsistent with the article as written. Further, Defendants object to the admissibility of the article and Plaintiffs’ reliance on the same. See Defendants’ Motion to Preclude Expert Testimony of Plaintiffs’ Proffered Expert Witness, Michael F. Potter. Dkt. # 142, at pp. 5-10.

149. In Lund (1984), the researchers concluded that the findings “strongly indicate that a practical effect in a warehouse, stable, store room, or almost any building is out of the question.” Kopel Decl. Ex. 2, Potter Report ¶ 74; *id.* Ex. 54, Lund (1984).

Defendants’ Response: Defendants do not dispute the existence of the cited article. Defendants object to Plaintiffs’ characterization of the article to the extent that it is inconsistent with the article as written. Further, Defendants object to the admissibility of the article and Plaintiffs’ reliance on the same. See Defendants’ Motion to Preclude Expert Testimony of Plaintiffs’ Proffered Expert Witness, Michael F. Potter. Dkt. # 142, at pp. 5-10.

150. The below chart summarizes the studies cited herein on the efficacy of ultrasonic technology. As reflected in the chart, the devices studied all used technology with the same or very similar properties (frequency, amplitude, pulse variation) to the Bell + Howell devices at issue.

STUDY	PEST TESTED	FREQUENCY	AMPLITUDE	VARIABLE/PULSATING	TEST RESULT
Ballard and Gold (1983)	Cockroaches	20-60 kHz		No	Failed
Ballard et al. (1984)	Cockroaches	30-65 kHz		yes	Failed
Gold et al. (1984) (FTC)	Cockroaches	20-50 kHz	100-137 dB	yes	Failed
Schreck et al. (1984)	Cockroaches	44-53 kHz	96 dB	yes	Failed
Ahmad et al. (2007)	Cockroaches	20-100 kHz	91-102 dB	yes	Failed
Huang and Subramanyam (2006)	Cockroaches	26-42 kHz	88-95 dB	yes	Failed
Koehler et al. (1986)	Cockroaches	17-71 kHz	51-103 dB	yes	Failed
Gold (1995)	Cockroaches				Failed
Decker et al. (1989)	Cockroaches	10-40 kHz		no	Failed
Huang et al. (2002)	Ants	26-42 kHz	88-95 dB	yes	Failed
Warner and Scheffrahn (2005)	Ants				Failed
Subramanyam (2003)	Spiders	26-42 kHz	88-95 dB	yes	Failed
Sprock et al (1967)	rats and mice	1.8-48 kHz	60-140 dB		Failed
Meehan (1976)	rats	varying	varying	yes	Failed
Lavoie and Glahn (1977)	Rats	19-50 kHz	87-112 dB	yes	Failed
Shumake et al. (1984)	Rats and mice	20-100 kHz	78-122 dB	yes	Failed
Howard and Marsh (1985)	rats and mice	varying	varying	yes	Failed
Lund (1984)	Rats	varying	100-130 dB	yes	Failed
Bell + Howell Repellers		36-40 kHz	88-99 dB	certain models	

Kopel Decl. Ex. 2, Potter Report ¶¶ 78.

Defendants' Response: Defendants object to Plaintiffs' use of the above chart to the extent that the individual inputs are inconsistent with the articles cited. Further, Defendants object to the admissibility of the articles and Plaintiffs' reliance on the same. See Defendants' Motion to Preclude Expert Testimony of Plaintiffs' Proffered Expert Witness, Michael F. Potter. Dkt. # 142, at pp. 5-10. Defendants further dispute the last column of Plaintiffs' chart as it is Plaintiffs' expert opinion Dr. Potter's opinion as to the perceived results of the tests.

151. Defendants commissioned seven tests performed on the Bell + Howell repellers which were commissioned by Defendants and conducted in China (the "Chinese Studies"). *See* Kopel Decl. Exs. 32-38.

Defendants' Response: Not disputed.

152. Protocols for the Chinese Studies were written by Debbie Feuerstein. Kopel Decl. Ex. 8, Feuerstein Dep. at 105:12-16 (“When you say that we wrote a thorough test protocol -- A: Me. Q: You wrote that? A: Me, I -- I wrote that.”).

Defendants’ Response: Disputed. Plaintiffs’ statement mischaracterizes the evidence. Ms. Feuerstein designed the testing protocols based on the recommendation of Michigan State University and in conjunction with previous testing performed with SGS in Taiwan and Beijing University. See Feuerstein Dep. at pp. 103:16-104:24

153. Intellitec employees set up and ran the Chinese Studies. *See* Kopel Decl. Ex. 8, Feuerstein Dep. at 141:4-6 (Intellitec employees “set up the chambers” and “put the pests into the chambers”).

Defendants’ Response: Disputed. Plaintiffs’ statement mischaracterizes the evidence. The tests were performed in conjunction with the testing laboratories. See Feuerstein Dep. at pp. 140:7-142:14.

154. Several of the Chinese Studies were reported by SGS, Ms. Feuerstein’s former employer. *See* Kopel Decl. Ex. 8, Feuerstein Dep. at at 40 (“Q: Do you work for a company called SGS? A: Yes.”).

Defendants’ Response: Not disputed.

155. Intertek Report 160419051GZU-002 tested an unknown model of the Bell + Howell repellents against ants, spiders, and roaches from April 7, 2016 to April 18, 2016 (“Study 1”). *See* Kopel Decl. Ex. 32.

Defendants’ Response: Defendants do not dispute that Intertek conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs’ statement to the extent that it is inconsistent with the report as written.

156. Study 1 utilized “two plastic chambers, Chamber A (with ultrasonic repeller) and Chamber B (no ultrasonic repeller)” with a 10-foot plastic tunnel connecting the two chambers. Kopel Decl. Ex. 32. at 3.

Defendants’ Response: Defendants do not dispute that Intertek conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs’ statement to the extent that it is inconsistent with the report as written.

Each chamber was 4 ft. (L) x 4 ft. (W) x 1.5 ft. (H). Kopel Decl. Ex. 32.

Defendants’ Response: Defendants do not dispute that Intertek conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs’ statement to the extent that it is inconsistent with the report as written.

157. The investigators in Study 1 observed the movement of the critters between Chamber A and Chamber B during a 7-day period in which the repeller was turned on, in a purported effort to determine the repellency effects of the repeller. Kopel Decl. Ex. 32. at 4.

Defendants’ Response: Defendants do not dispute that Intertek conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs’ statement to the extent that it is inconsistent with the report as written.

158. QMANN Report 10275-2 tested Bell + Howell repeller model # 20161 against mice, spiders, and roaches from November 1, 2010 to November 19, 2010 (“Study 2”). Kopel Decl. Ex. 33.

Defendants’ Response: Defendants do not dispute that QMANN conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs’ statement to the extent that it is inconsistent with the report as written.

159. Study 2 was conducted in an empty 2-room space of an unknown total size. One room had the activated repeller, while the other room did not. Kopel Decl. Ex. 33. at 1.

Defendants' Response: Defendants do not dispute that QMANN conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the report as written.

160. The investigators in Study 2 observed the movements of the critters between the two rooms during a 9-day period in which the repeller was turned on in a purported effort to determine the repellency effects of the repeller. Kopel Decl. Ex. 33. at 2.

Defendants' Response: Defendants do not dispute that QMANN conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the report as written.

161. QMANN Report 10275-1 tested the Bell + Howell repeller model # 50153 against mice, spiders, and roaches from November 1, 2010 to November 19, 2010 ("Study 3"). Kopel Decl. Ex. 34.

Defendants' Response: Defendants do not dispute that QMANN conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the report as written.

162. Study 3 was conducted in an empty 6-room space. Five of the rooms totaled 2091 sq. feet, but the total space among the six rooms was not reported. Kopel Decl. Ex. 34. at 1.

Defendants' Response: Defendants do not dispute that QMANN conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the report as written. In Study 3, one repeller was placed in room # 3, the middle room. The other rooms contained no repeller. Kopel Decl. Ex. 34.

Defendants' Response: Defendants do not dispute that QMANN conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the report as written.

163. The investigators in Study 3 observed the movements of the critters between the rooms during a 9-day period in which the repeller was turned on in a purported effort to determine the repellency effects of the repeller. Kopel Decl. Ex. 34.

Defendants' Response: Defendants do not dispute that QMANN conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the report as written.

164. SGS Report SZXWT00603439 tested an unknown model of the Bell + Howell repellers against ants, spiders, and roaches from March 12, 2012 to March 21, 2012 ("Study 4"). Kopel Decl. Ex. 35.

Defendants' Response: Defendants do not dispute that SGS conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the report as written.

165. Study 4 utilized two plastic chambers, chamber A (with ultrasonic repeller) and Chamber B (no ultrasonic repeller), with a 10-foot plastic tunnel connecting the two chambers. Kopel Decl. Ex. 35. at 2.

Defendants' Response: Defendants do not dispute that SGS conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the report as written.

166. Each chamber in Study 4 was 4 ft. (L) x 4 ft. (W) x 1.5 ft. (H). Kopel Decl. Ex. 35.

Defendants' Response: Defendants do not dispute that SGS conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the report as written.

167. The investigators in Study 4 observed the movement of the critters between Chamber A and Chamber B during a 7-day period in which the repeller was turned on, in a purported effort to determine the repellency effects of the repeller. Kopel Decl. Ex. 35. at 5.

Defendants' Response: Defendants do not dispute that SGS conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the report as written.

168. Intertek Report 140515021GZU-002 tested Bell Howell repeller model # 50167 against ants, spiders, and roaches from May 16, 2014 to May 27, 2014 ("Study 5"). Kopel Decl. Ex. 36.

Defendants' Response: Defendants do not dispute that Intertek conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the report as written.

169. Study 5 utilized "two plastic chambers, chamber A (with ultrasonic repeller) and Chamber B (no ultrasonic repeller)," with a 10-foot plastic tunnel connecting the two chambers. Kopel Decl. Ex. 36. at 3.

Defendants' Response: Defendants do not dispute that Intertek conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the report as written.

170. Each chamber in Study 5 was 4 ft. (L) x 4 ft. (W) x 1.5 ft. (H). Kopel Decl. Ex. 36.

Defendants' Response: Defendants do not dispute that Intertek conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the report as written.

171. The investigators in Study 5 observed the movement of the critters between Chamber A and Chamber B during a 7-day period in which the repeller was turned on, in a purported effort to determine the repellency effects of the repeller. Kopel Decl. Ex. 36. at 4.

Defendants' Response: Defendants do not dispute that Intertek conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the report as written.

172. Intertek Report SZXWT00585081 tested an unknown model of the Bell + Howell repellers against mice and rats from December 1, 2011 to December 11, 2011 ("Study 6"). Kopel Decl. Ex. 37.

Defendants' Response: Defendants do not dispute that Intertek conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the report as written.

173. Study 6 utilized two plastic chambers, chamber A (with ultrasonic repeller) and Chamber B (no ultrasonic repeller), with a 7-foot plastic tunnel connecting the two chambers. Kopel Decl. Ex. 37. at 2.

Defendants' Response: Defendants do not dispute that Intertek conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the report as written.

174. Each chamber in Study 4 was 4 ft. (L) x 4 ft. (W) x 1.5 ft. (H). Kopel Decl. Ex. 37.

Defendants' Response: Defendants do not dispute that Intertek conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the report as written.

175. The investigators in Study 6 observed the movement of the critters between Chamber A and Chamber B during a 7-day period in which the repeller was turned on, in a purported effort to determine the repellency effects of the repeller. Kopel Decl. Ex. 37. at 8.

Defendants' Response: Defendants do not dispute that Intertek conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the report as written.

176. Intertek Report 140515021GZU-001 tested Bell + Howell repeller model # 50167 against mice and rats from May 16, 2014 to May 27, 2014 ("Study 7"). Kopel Decl. Ex. 38.

Defendants' Response: Defendants do not dispute that Intertek conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the report as written.

177. Study 7 utilized two plastic chambers, "Chamber A (with ultrasonic repeller) and Chamber B (no ultrasonic repeller)," with a 8.5-foot plastic tunnel connecting the two chambers. Kopel Decl. Ex. 38. at 3.

Defendants' Response: Defendants do not dispute that Intertek conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the report as written.

178. Each chamber in Study 7 was 4 ft. (L) x 4 ft. (W) x 2 ft. (H). Kopel Decl. Ex. 38.

Defendants' Response: Defendants do not dispute that Intertek conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the report as written.

179. The investigators in Study 7 observed the movement of the critters between Chamber A and Chamber B during a 7-day period in which the repeller was turned on, in a purported effort to determine the repellency effects of the repeller. Kopel Decl. Ex. 38. at 5.

Defendants' Response: Defendants do not dispute that Intertek conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the report as written.

180. Seven of the seven Chinese Studies failed to use an experimental control. Kopel Decl. Ex. 2, Potter Report ¶ 80.

Defendants' Response: Defendants do not dispute that seven studies were conducted and a report was issued after the completion of each study. Defendants state that the reports speak for themselves. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the reports as written.

181. "[Y]ou have to have a control" because "without a control, as a matter of science, the data from a study is meaningless." Kopel Decl. Ex. 5, Whitford Dep. at 92:12-16.

Defendants' Response: Plaintiffs' statement is a series of quotes from Dr. Whitford's deposition. Defendants do not dispute Dr. Whitford's testimony. Defendants object to the extent that Plaintiffs' use Dr. Whitford's testimony out of context to support its opinion.

182. Study 1 was not performed for an equal amount of time with the repeller either not present or turned off. Kopel Decl. Ex. 32.

Defendants' Response: Defendants do not dispute that Intertek conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the report as written.

183. It is unknown what the distribution of critters would have been between Chamber A and Chamber B over a 7-day period had the study been performed with the repeller either not present or turned off in Study 1. Kopel Decl. Ex. 32.

Defendants' Response: Disputed. Plaintiffs' statement is an opinion not supported by the evidence in this case.

184. Due to the lack of an experimental control, it is scientifically impossible to know if any movement of the critters being tested was due to any effect of the repellents, or some other factor. Kopel Decl. Ex. 2, Potter Report ¶ 80.

Defendants' Response: Disputed. Plaintiffs' statement is an opinion not supported by the evidence in this case.

185. The failure to include an experimental control renders Study 1 scientifically unreliable. Kopel Decl. Ex. 2, Potter Report ¶ 80.

Defendants' Response: Disputed. Plaintiffs' statement is an opinion not supported by the evidence in this case.

186. Study 2 was not performed for an equal amount of time with the repeller either not present or turned off. Kopel Decl. Ex. 33.

Defendants' Response: Defendants do not dispute that QMANN conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the report as written.

187. It is unknown what the distribution of critters would have been between the two rooms over a 9-day period had the study been performed with the repeller either not present or turned off in Study 2. Kopel Decl. Ex. 33.

Defendants' Response: Disputed. Plaintiffs' statement is an opinion not supported by the evidence in this case.

188. Due to the lack of an experimental control in Study 2, it is scientifically impossible to know if any movement of the critters being tested was due to any effect of the repellents, or some other factor. Kopel Decl. Ex. 2, Potter Report ¶ 80.

Defendants' Response: Disputed. Plaintiffs' statement is an opinion not supported by the evidence in this case.

189. The failure to include an experimental control renders Study 2 scientifically unreliable. Kopel Decl. Ex. 2, Potter Report ¶ 80.

Defendants' Response: Disputed. Plaintiffs' statement is an opinion not supported by the evidence in this case.

190. Study 3 was not performed for an equal amount of time with the repeller either not present or turned off. Kopel Decl. Ex. 34.

Defendants' Response: Defendants do not dispute that QMANN conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the report as written.

191. It is unknown what the distribution of critters would have been between the six rooms over a 9-day period had the study been performed with the repeller either not present or turned off in Study 3. Kopel Decl. Ex. 34.

Defendants' Response: **Disputed. Plaintiffs' statement is an opinion not supported by the evidence in this case.**

192. Due to the lack of an experimental control in Study 3, it is scientifically impossible to know if any movement of the critters being tested was due to any effect of the repellents, or some other factor. Kopel Decl. Ex. 2, Potter Report ¶ 80.

Defendants' Response: **Disputed. Plaintiffs' statement is an opinion not supported by the evidence in this case.**

193. The failure to include an experimental control renders Study 3 scientifically unreliable. Kopel Decl. Ex. 2, Potter Report ¶ 80.

Defendants' Response: **Disputed. Plaintiffs' statement is an opinion not supported by the evidence in this case.**

194. Study 4 was not performed for an equal amount of time with the repeller either not present or turned off. Kopel Decl. Ex. 35.

Defendants' Response: **Defendants do not dispute that Intertek conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the report as written.**

195. It is unknown what the distribution of critters would have been between the chambers over a 7-day period had the study been performed with the repeller either not present or turned off in Study 4. Kopel Decl. Ex. 35.

Defendants' Response: **Disputed. Plaintiffs' statement is an opinion not supported by the evidence in this case.**

196. Due to the lack of an experimental control in Study 4, it is scientifically impossible to know if any movement of the critters being tested was due to any effect of the repellents, or some other factor. Kopel Decl. Ex. 2, Potter Report ¶ 80.

Defendants' Response: Disputed. Plaintiffs' statement is an opinion not supported by the evidence in this case.

197. The failure to include an experimental control renders Study 4 scientifically unreliable. Kopel Decl. Ex. 2, Potter Report ¶ 80.

Defendants' Response: Disputed. Plaintiffs' statement is an opinion not supported by the evidence in this case.

198. Study 5 was not performed for an equal amount of time with the repeller either not present or turned off. Kopel Decl. Ex. 36.

Defendants' Response: Defendants do not dispute that Intertek conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the report as written.

199. It is unknown what the distribution of critters would have been between the two chambers over a 7-day period had the study been performed with the repeller either not present or turned off in Study 5. Kopel Decl. Ex. 36.

Defendants' Response: Disputed. Plaintiffs' statement is an opinion not supported by the evidence in this case.

200. Due to the lack of an experimental control in Study 5, it is scientifically impossible to know if any movement of the critters being tested was due to any effect of the repellents, or some other factor. Kopel Decl. Ex. 2, Potter Report ¶ 80.

Defendants' Response: **Disputed. Plaintiffs' statement is an opinion not supported by the evidence in this case.**

201. The failure to include an experimental control renders Study 5 scientifically unreliable. Kopel Decl. Ex. 2, Potter Report ¶ 80.

Defendants' Response: **Disputed. Plaintiffs' statement is an opinion not supported by the evidence in this case.**

202. Study 6 was not performed for an equal amount of time with the repeller either not present or turned off. Kopel Decl. Ex. 37.

Defendants' Response: **Defendants do not dispute that Intertek conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the report as written.**

203. It is unknown what the distribution of critters would have been between the two chambers over a 7-day period had the study been performed with the repeller either not present or turned off in Study 6. Kopel Decl. Ex. 37.

Defendants' Response: **Disputed. Plaintiffs' statement is an opinion not supported by the evidence in this case.**

204. Due to the lack of an experimental control in Study 6, it is scientifically impossible to know if any movement of the critters being tested was due to any effect of the repellents, or some other factor. Kopel Decl. Ex. 2, Potter Report ¶ 80.

Defendants' Response: **Disputed. Plaintiffs' statement is an opinion not supported by the evidence in this case.**

205. The failure to include an experimental control renders Study 6 scientifically unreliable. Kopel Decl. Ex. 2, Potter Report ¶ 80.

Defendants' Response: **Disputed.** Plaintiffs' statement is an opinion not supported by the evidence in this case.

206. Study 7 was not performed for an equal amount of time with the repeller either not present or turned off. Kopel Decl. Ex. 38.

Defendants' Response: Defendants do not dispute that Intertek conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the report as written.

207. It is unknown what the distribution of critters would have been between the two chambers over a 7-day period had the study been performed with the repeller either not present or turned off in Study 7. Kopel Decl. Ex. 38.

Defendants' Response: **Disputed.** Plaintiffs' statement is an opinion not supported by the evidence in this case.

208. Due to the lack of an experimental control in Study 7, it is scientifically impossible to know if any movement of the critters being tested was due to any effect of the repellents, or some other factor. Kopel Decl. Ex. 2, Potter Report ¶ 80.

Defendants' Response: **Disputed.** Plaintiffs' statement is an opinion not supported by the evidence in this case.

209. The failure to include an experimental control renders Study 7 scientifically unreliable. Kopel Decl. Ex. 2, Potter Report ¶ 80.

Defendants' Response: **Disputed.** Plaintiffs' statement is an opinion not supported by the evidence in this case.

210. Study 1 tested ants, spiders and roaches together in the same chambers at the same time. Kopel Decl. Ex. 32 at 6; *Id.* Ex. 7, Borth Dep. at 136:14-22 (“Q: Okay. Were the spiders, ants, and roaches all in the same chamber in this test? ... A: Yes, they were.”).

Defendants’ Response: Defendants do not dispute that Intertek conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs’ statement to the extent that it is inconsistent with the report as written.

211. Study 5 tested ants, spiders and roaches together in the same chambers at the same time. Kopel Decl. Ex. 36 at 5; *Id.* Ex. 7, Borth Dep. at 174:21-175:1 (“Q: Okay. Does that seem to you likely ... that they were in the same chamber ...? A: It – it could be. It’s reasonable to assume that.”).

Defendants’ Response: Defendants do not dispute that Intertek conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs’ statement to the extent that it is inconsistent with the report as written.

212. The text of Study 4 itself states: “As spiders are larger and far more aggressive than ants and roaches, they can, and often do, kill smaller pests like ants and roaches. Therefore, the testing of spiders and ants/roaches must be conducted separately in different times.” Kopel Decl. Ex. 35 at 3.

Defendants’ Response: Defendants do not dispute that SGS conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs’ statement to the extent that it is inconsistent with the report as written.

213. Since “certain spiders prey upon cockroaches and ants, perceived repellency [in Studies 1 and 5] could have been from avoiding predators rather than the device.” Kopel Decl. Ex. 2, Potter Report ¶ 81.

Defendants’ Response: Disputed. Plaintiffs’ statement is an opinion not supported by the evidence in this case.

214. Dr. Borth acknowledged that “it’s possible [when] they’re in the chamber together at the same time ... the spiders, roaches, and ants were affecting each other’s movements within the chambers.” Kopel Decl. Ex. 7, Borth Dep. at 176:1-8 (“It’s possible, yes. We have no way of knowing.”).

Defendants’ Response: Disputed. Plaintiffs’ statement mischaracterizes Dr. Borth’s testimony. Dr. Borth’s testimony was related to a series of hypothetical questions regarding what Dr. Borth would have done had he performed the tests. See Borth Dep. at pp. 174:2-176:24.

215. Dr. Borth testified that he “would not have designed an experiment ... and put spiders and roaches and ants in the chamber or the testing arena at the same time.”). Kopel Decl. Ex. 7, Borth Dep. at 107:9-12.

Defendants’ Response: Disputed. Plaintiffs’ statement mischaracterizes Dr. Borth’s testimony. Dr. Borth testified that the experimental design depends on the test objective. Dr. Borth testified that he would have set up the test protocol to test all three pests if the test objective was to test “the effect of a repeller on all three pests at the same time.” See Borth Dep. at pp. 175:2-8.

216. Study 2 tested mice, spiders, and roaches together in the same space at the same time. Kopel Decl. Ex. 33 at 1.

Defendants’ Response: Defendants do not dispute that QMANN conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs’ statement to the extent that it is inconsistent with the report as written.

217. Study 3 tested mice, spiders, and roaches together in the same space at the same time. Kopel Decl. Ex. 34 at 1.

Defendants' Response: Defendants admit that QMANN conducted a study and issued a report. Defendants admit that the report speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the report as written.

218. "Mice eat cockroaches and spiders." Kopel Decl. Ex. 2, Potter Report ¶ 81.

Defendants' Response: Not disputed.

219. Since "Mice eat cockroaches and spiders ... perceived repellency [in Studies 2 and 3] could have been from avoiding predators rather than the device." Kopel Decl. Ex. 2, Potter Report ¶ 81.

Defendants' response: Disputed. Plaintiffs' statement is an opinion not supported by the evidence in this case.

220. When discussing Studies 2 and 3, Dr. Whitford stated "The mixing of things in six-room chambers, the very small number of animals used, it just -- it didn't have adequate evidence to determine anything." Kopel Decl. Ex. 5, Whitford Dep. at 188:11-15.

Defendants' Response: Disputed. Plaintiffs' statement mischaracterizes Dr. Whitford's testimony. Dr. Whitford testified that the QMANN studies tested the effects of overcrowding. See Whitford Dep. at 188:22-189:2.

221. Dr. Whitford testified that these deficiencies rendered Studies 2 and 3 "unreliable." Kopel Decl. Ex. 5, Whitford Dep. at 188:15-189:9.

Defendants' Response: Disputed. Plaintiffs' statement mischaracterizes Dr. Whitford's testimony. Dr. Whitford testified that the QMANN studies tested the effects of overcrowding. See Whitford Dep. at 188:22-189:2.

222. Study 4 tested ants and roaches together in the same chambers at the same time. Kopel Decl. Ex. 35 at 3.

Defendants' Response: Defendants do not dispute that SGS conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the report as written.

223. Dr. Borth also acknowledged that ants and roaches can affect each other's movements as well. Kopel Decl. Ex. 7, Borth Dep. at 111:25-112:2 ("Q: Now, do you agree that ants and roaches can affect each other's movements? A: They might.").

Defendants' Response: Disputed. Plaintiff's statement mischaracterizes Dr. Borth's testimony. Dr. Borth testified that ants and roaches "might" affect each other's behavior, but was not concerned with the possibility on the effectiveness of ultrasound on ants or roaches. See Borth Dep. at 111:16-113:13.

224. Due to the mixing of critters in the testing spaces, Studies 1-5 are unreliable. Kopel Decl. Ex. 2, Potter Report ¶ 81.

Defendants' response: Disputed. Plaintiffs' statement is an opinion not supported by the evidence in this case.

225. None of the Chinese Studies were replicated. *See* Kopel Decl. Ex. 7, Borth Dep. at 171:24-172:1 ("Q: And all the tests that we've reviewed so far have not been replicated; correct? A: Not in the true sense.").

Defendants' response: Disputed. Plaintiffs' statement is an opinion not supported by the evidence in this case. Further, Plaintiffs' statement mischaracterizes Dr. Borth's testimony. Dr. Borth testified that they were not replicated in the "true sense". See Borth Dep. at 171:24-172:1.

226. In order to have an "adequate basis to make [a] claim" experiments need to be "repeated again and again." Kopel Decl. Ex. 5, Whitford Dep. at 168:1-3.

Defendants' Response: Disputed. Plaintiffs' statement mischaracterizes Dr. Whitford's testimony. Dr. Whitford testified that authors Marsh and Howard did not provide an adequate basis for making a statement that was contained in Marsh and Howard's published article. See Whitford Dep. at 164:1-169:3.

227. Dr. Borth testified he would have required testing that was "replicated" in order to "make a commercialization decision" in the course of his work at Dow. *See* Kopel Decl. Ex. 7, Borth Dep. at 179:17-182:18.

Defendants' response: Disputed. Plaintiffs' statement mischaracterizes Dr. Borth's testimony. Dr. Borth testified that the results of the Chinese Studies would likely not have been used to commercialize a product at Dow Chemical. Plaintiffs' statement is an opinion and is not supported by the evidence in this case. Plaintiffs' statement ignores that businesses, such as Dow Chemical, operate differently and have different criteria for commercializing products. See Borth Dep. at 179:17-182:18.

228. The lack of replication renders the Chinese Studies an unreliable basis to reach opinions of efficacy as a matter of science. Kopel Decl. Ex. 7, Borth Dep. at 179:17-182:18.

Defendants' response: Disputed. Plaintiffs' statement is an opinion not supported by the evidence in this case. Further, Plaintiffs' statement mischaracterizes Dr. Borth's testimony. Dr. Borth testified that the results of the Chinese Studies would likely not have been used to commercialize a product at Dow Chemical. Plaintiffs' statement is an opinion and is not supported by the evidence in this case. Plaintiffs' statement ignores that businesses, such as Dow Chemical, operate differently and have different criteria for commercializing products. See Borth Dep. at 179:17-182:18.

229. All seven Chinese Studies failed to specify which species of critters were being tested. Kopel Decl. Ex. 7, Borth Dep. at 113:15-19 (“Q: What species were used in this test? A: They do not say. Q: Is it important to know what species they used? A: It would be helpful.”); *Id.* Ex. 5, Whitford Dep. at 201:20-22 (“Q: What species of mice was used in this test? A: They weren’t stated.”).

Defendants’ Response: Defendants do not dispute that seven studies were conducted and a report was issued after the completion of each study. Defendants state that the reports speak for themselves. Defendants object to Plaintiffs’ statement to the extent that it is inconsistent with the reports as written.

230. Because the species tested were unknown, the tests are not even *capable* of replication. *See* Kopel Decl. Ex. 7, Borth Dep. at 126:2-13 (“Q: Given that you don’t know the species of the pests used, would you be able to replicate this test if you wanted to? A: It would be ... coincidence I guess. ... I can certainly test roaches, I can test ants, and I can test spiders. Whether they’re exactly the same species, we don’t know since they – since they didn’t say.”).

Defendants’ response: Disputed. Plaintiffs’ statement is an opinion not supported by the evidence in this case.

231. While no species were specified, photographs of Study 3 indicate that white laboratory mice were likely used. *See* Kopel Decl. Ex. 2, Potter Report ¶ 86.

Defendants’ Response: Defendants do not dispute that QMANN conducted a study and issued a report. Defendants state that the report speaks for itself. Defendants object to Plaintiffs’ statement to the extent that it is inconsistent with the report as written.

232. Dr. Whitford himself acknowledged that it would be improper to use white mice for such an experiment. *See* Kopel Decl Ex. 5, Whitford Dep. at 116:15-18 (“Q: So would it be reasonable to

surmise that they might react to ultrasound differently than other types of mice? A: White lab mice, probably so.”).

Defendants’ Response: Disputed. Plaintiffs’ statement mischaracterized Dr. Whitford’s testimony. Dr. Whitford testified that white lab mice are different from “other types of mice” because white lab mice are the product of generations of captive breeding. Dr. Whitford testified that white lab mice may react differently to ultrasound. See Whitford Dep. at 115:15-116:18.

233. Three of seven Chinese studies, Studies 1, 2, and 5, used a protocol where the people conducting the test replaced dead critters with new live ones in the middle of the test, and did not record or explain whether the new live ones were placed in the repeller or non-repeller areas of the tests. *See* Kopel Decl. Ex. 7, Borth Dep. at 139:22-23 (“Q: Which chamber were they put in? A: It’s not readily apparent.”).

Defendants’ Response: Defendants do not dispute that seven studies were conducted and a report was issued after the completion of each study. Defendants state that the reports speak for themselves. Defendants object to Plaintiffs’ statement to the extent that it is inconsistent with the reports as written.

234. Dr. Whitford testified that replacing dead critters with live ones mid-experiment “would not be proper” and that “[a] scrupulous scientist would not” do that. Kopel Decl. Ex. 5, Whitford Dep. 235:23-241:8.

Defendants’ Response: Plaintiffs’ statement is a series of quotes from Dr. Whitford’s deposition. Defendants do not dispute Dr. Whitford’s testimony. Defendants object to the extent that Plaintiffs’ use Dr. Whitford’s testimony out of context to support its opinion.

235. When asked about the practice of replacing dead critters with live ones mid-experiment, Dr. Borth stated “I would not have done that.” Kopel Decl. Ex. 7, Borth Dep. at 138:17.

Defendants' Response: Plaintiffs' statement is a series of quotes from Dr. Whitford's deposition. Defendants do not dispute Dr. Whitford's testimony. Defendants object to the extent that Plaintiffs' use Dr. Whitford's testimony out of context to support its opinion.

236. Dr. Borth agreed that this practice skewed the test results given that it remains unknown where the new pests were added:

Q: Do you agree that had ... these new pests been added to Chamber B, that would skew the test results?

A: Had they been – yes, but the degree to which I don't know.

...

Q: But you haven't done the calculations to figure that out; have you?

A: ... I did not take into account the quantity lost as they describe it.

Kopel Decl. Ex. 7, Borth Dep. at 147:23-148:14.

Defendants' Response: Disputed. Plaintiffs' statement mischaracterizes Dr. Borth's testimony. Dr. Borth testified that he does not know the extent that the results may have been impacted by adding new pests. See Borth Dep. at 148:1-2.

237. Five of seven studies, Studies 1, 4, 5, 6, and 7, were conducted in empty containers connected by a tunnel. *See* Kopel Decl. Exs. 32, 35, 36, 37 & 38.

Defendants' Response: Defendants do not dispute that seven studies were conducted and a report was issued after the completion of each study. Defendants state that the reports speak for themselves. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the reports as written.

238. The people conducting the tests either explicitly counted pests found in the tunnel as being "repelled" or did not specify whether they were doing so. Kopel Decl. Exs. 32, 35, 36, 37 & 38.

Defendants' Response: Defendants do not dispute that seven studies were conducted and a report was issued after the completion of each study. Defendants state that the reports speak for themselves. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the reports as written.

239. When questioned about this practice, Defendants' expert witness, Dr. Whitford, was emphatic that "the tunnel itself should be considered the tunnel" and "should not be considered Chamber B." Kopel Decl. Ex. 5, Whitford Dep. at 234:1-9.

Defendants' Response: Disputed. Plaintiffs' statement is an opinion and not supported by the evidence in this case. Further, Plaintiffs' statement mischaracterizes Dr. Whitford's testimony as "emphatic." See Whitford Dep. at 234:1-9.

240. Koehler (1986) is a peer-reviewed study with a similar setup, however, critters in the tunnel were not counted as repelled. *See* Kopel Decl. Ex. 7, Borth Dep. at 200:2-201:22 ("Q: ... Dr. Koehler did not count the corridor as being repelled correct? A: He treated it as third category. Q: So that's a yes, he did not count it as being repelled, correct? A: He didn't say as such, no. Q: And this is a peer reviewed article, correct? A: Yes.").

Defendants' Response: Defendants object to Plaintiffs' statements to the extent that they are inconsistent with the article as written. Further, Defendants object to the admissibility of the article and Plaintiffs' reliance on the same. See Defendants Motion to Preclude Expert Testimony of Plaintiffs' Proffered Expert Witness, Michael F. Potter. Dkt. # 142, at pp. 5-10.

241. Huang and Subramanayam is a peer reviewed study with a similar setup, however, critters in the tunnel were not counted as repelled. Kopel Decl. Ex. 7, Borth Dep. at 247:21-248:8 (Q: Okay. So do you understand based on this, that the insects found in the corridors were not counted as repelled in this study? A: Based on that sentence, that's what I would assume. ... Q: And that aspect

of the protocol also was necessarily approved through the scrutiny of the peer review process; correct?
A: Yes ...”).

Defendants’ Response: Defendants object to Plaintiffs’ statements to the extent that they are inconsistent with the article as written. Further, Defendants object to the admissibility of the article and Plaintiffs’ reliance on the same. See Defendants’ Motion to Preclude Expert Testimony of Plaintiffs’ Proffered Expert Witness, Michael F. Potter. Dkt. # 142, at pp. 5-10.

242. Ahmad (2007) is a peer reviewed study with a similar setup, however, critters in the tunnel were not counted as repelled. Kopel Decl. Ex. 7, Borth Dep. at 253:5-8 (“Q: So do you understand based on this, that in this test the cockroaches found in the conduits connecting the chambers were not counted as repelled? A: That’s what they said, yes.”).

Defendants’ Response: Defendants object to Plaintiffs’ statements to the extent that they are inconsistent with the article as written. Further, Defendants object to the admissibility of the article and Plaintiffs’ reliance on the same. See Defendants’ Motion to Preclude Expert Testimony of Plaintiffs’ Proffered Expert Witness, Michael F. Potter. Dkt. # 142, at pp. 5-10.

243. At his deposition, Dr. Borth could not list a single peer reviewed study in which critters found in the tunnel were counted as repelled. Kopel Decl. Ex. 7, Borth Dep. at 253:19-254:19.

Defendants’ Response: Disputed. Plaintiffs’ statement mischaracterizes Dr. Borth’s testimony. Dr. Borth testified that he would list his report as a study that counts animals in the tunnel as repelled. Further, Dr. Borth testified that he could not accurately answer the question without “doing as full literature search”. See Borth Dep. at 254:1-254:19.

244. No harborage was provided to the critters in any of the Chinese Studies. Kopel Decl. Exs. 32-38.

Defendants' Response: Defendants do not dispute that seven studies were conducted and a report was issued after the completion of each study. Defendants state that the reports speak for themselves. Defendants object to Plaintiffs' statement to the extent that it is inconsistent with the reports as written.

245. Areas of harborage, where pests can seek shelter and feel protected, is a necessity of life for these critters, and the critters specifically place their nests in these spaces (furniture, pantries, inside walls, and under floors, etc.) inside peoples' homes:

Q: Where do insects typically nest inside of the house?

A: Any place that suits their requirements.

Q: And what's that?

A: ... I would put ... a list together. It would be safety, they need food, they need water, and they are born to breed.

Q: What do you mean by safety?

A: Oh, they feel protected.

Q: So they prefer ... to nest in a place with harborage correct?

A: Well, cockroaches and ants do, which are the case here.

Q: And those are the areas where ... the Bell + Howell repellers cannot reach; correct?

A: Ultrasound cannot reach them. ...

Kopel Decl. Ex. 7, Borth Dep. at 267:17-268:12.

Defendants' Response: Plaintiffs' statement is an opinion that is not supported by the evidence in this case. Plaintiffs' mischaracterize Dr. Borth's testimony. Dr. Borth did not testify that areas of harborage are necessities of life for insects. Further, Dr. Borth did not testify as to nesting places. See Borth Dep. at 267:17-268:12.

246. Dr. Borth agreed that use of harborage in testing more closely approximates real-world conditions. *See* Kopel Decl. Ex. 7, Both Dep. at 198:11-20 (“Q: Would you agree – use of harborage in such an experiment would more closely approximate real-world conditions ...? A: If – yes – if that’s the objective of the experiment.”).

Defendants’ Response: Plaintiffs’ statement mischaracterizes Dr. Borth’s testimony. Dr. Borth’s answer was in response to a line of questioning with regard to an article written by Philip Koehler. See Borth Dep. at 187:2-204:9.

247. Dr. Borth also relies on a peer-reviewed study, Ballard (1984), in reaching his conclusion that the devices are effective to repel pests. *See* Kopel Decl. Ex. 3, Borth Report at 6-7.

Defendants’ Response: Plaintiffs’ statement mischaracterizes Dr. Borth’s report as written.

248. Borth states that Ballard (1984) found that cockroach “activity was increased by the active ultrasound-emitting device.” Kopel Decl. Ex. 3, Borth Report at 7.

Defendants’ Response: Not disputed.

249. The study’s authors themselves, stated that “the biological importance of these observations is difficult to interpret” and “there was no evidence that either control or repulsion of German cockroach populations occurred as a result of ultrasound.” *See* Kopel Decl. Ex. 41, Ballard (1984) at 979 and Ex. 42, Gold (1984) at 1507.

Defendants’ Response: Disputed. Defendants do not dispute that Ballard and Gold published two articles. Defendants disputes that Plaintiffs have accurately summarized those articles. Specifically, Ballard stated that the results suggested that ultrasound had an effect on cockroaches, but did state that the observations are difficult to interpret. (Ballard, 1984 at 976-79). Gold stated that the tests showed “[a]t best, cockroaches could be possibly moved to sound

shadows within a residence, but this should not be considered control because the same population would still exist within the confines of the defined environment.” (Gold, 1984 at 1512).

250. Dr. Whitford also bases his opinion that the Bell + Howell repellers are effective on his testing of the Bird-X Transonic Pro, a separate electronic pest repeller, for its efficacy against mice in his own farmhouse. *See* Kopel Decl. Ex. 43 (Transonic Pro study).

Defendants’ Response: Not disputed.

251. In his study, Dr. Whitford positioned the Transonic Pro unit facing the entry point into his basement, and found that he captured zero mice when the device was activated during 2009, compared with 32 mice which he captured with the device turned off in 2010. *See* Kopel Decl. Ex. 43 (Transonic Pro study) Abstract Section (no page or paragraph numbers included).

Defendants’ Response: Defendants do not dispute that Dr. Whitford has performed a study of the Transonic Pro. Defendants do not dispute that Dr. Whitford has authored a draft report describing his study. The draft report speaks for itself. Defendants object to Plaintiffs’ statement to the extent it is inconsistent with the report as written.

252. There was no control performed in Dr. Whitford’s study, other than comparison between the results he saw in 2009 and 2010. *Kopel Decl. Ex. 43 (Transonic Pro study).*

Defendants’ Response: Defendants do not dispute that Dr. Whitford has performed a study of the Transonic Pro. Defendants do not dispute that Dr. Whitford has authored a draft report describing his study. The draft report speaks for itself. Defendants object to Plaintiffs’ statement to the extent it is inconsistent with the report as written.

253. “[I]n time-sequence trials such as this one, ‘before’ is not a control on ‘after’ because treatment is confounded with time Untreated control sites should be monitored concurrently with treated sites; otherwise, difference like those observed in this study could have been due to non-

treatment factors, in particular, natural yearly fluctuations in rodent abundance.” Kopel Decl. Ex. 44, Potter Rebuttal Report ¶ 57.

Defendants’ Response: **Disputed. Plaintiffs’ statement is an opinion and is not supported by the evidence in this case.**

254. “January 2009 was so cold it ranked as the coldest January since 1994, with extreme wind chill values down to -30°F to -45°F” in the area of Dr. Whitford’s farmhouse. *See* Kopel Decl. Ex. 44, Potter Rebuttal Report ¶ 58.

Defendants’ Response: **Not disputed.**

255. “Considering the extreme effect severe winters can have on white-footed mouse populations later in the year, numbers may have been intrinsically lower in 2009 (when the device was on), than in 2010 (when the device was off). Thus, fewer mice entering in the house while the device was operational could simply have been a result of fewer mice outdoors in nature.” Kopel Decl. Ex. 44, Potter Rebuttal Report ¶ 58.

Defendants’ Response: **Disputed. Plaintiffs’ statement is an opinion and is not supported by the evidence in this case.**

256. The Transonic Pro emits sonic and ultrasonic sound waves, whereas the Bell + Howell devices only emit ultrasonic sound waves. *See* Kopel Decl. Ex. 45 (Transonic Pro instructions).

Defendants’ Response: **Not disputed.**

257. Because the Transonic Pro unit is not an apples-to-apples comparison with the Bell + Howell devices in terms of the sound output, results from testing of the Transonic Pro cannot reliably be used to form opinions on the efficacy of the Bell + Howell devices. Kopel Decl. Ex. 2, Potter Rebuttal Report ¶ 54.

Defendants' Response: **Disputed. Plaintiffs' statement is an opinion and is not supported by the evidence in this case.**

258. The following chart summarizes the issues with each of the studies relied upon by Defendants' expert witnesses (citations *supra* in PSOF ¶¶ 153-262):

	Study 1	Study 2	Study 3	Study 4	Study 5	Study 6	Study 7	Ballard (1984)	Tranasonic Pro Study
No untreated experimental control	x	x	x	x	x	x	x		x
No replication	x	x	x	x	x	x	x		x
Failed to note species	x	x	x	x	x	x	x		
Used white lab mice			x						
Tested multiple critters in same enclosures at same time	x	x	x	x	x				
Data is "unreliable" according to Dr. Whitford		x	x						
Replaced dead critters in middle of testing	x	x			x				
Counted tunnel as "repelled"	x			x	x	x	x		
No harborage	x	x	x	x	x	x	x	x	
Conclusion conflicts with authors of study								x	
Device tested uses sonic sound waves									x

Defendants' Response: Defendants object to Plaintiffs' purported "summary" of the cited materials, as it misstates and mischaracterizes the articles and studies cited therein, and to the extent that it consists of the unsupported opinions of counsel.

259. During the relevant time period, members of the California Class purchased 183,796 units of the Repellers, sustaining damages of \$3,923,665. Kopel Decl. Ex. 27, 3/30/18 Weir Decl. ¶ 8; *id.* Table 4.

Defendants' Response: Disputed. Plaintiffs' statement is an opinion and is not supported by the evidence in this case.

260. During the relevant time periods, the Multistate Class purchased approximately 1,420,802 units of the Repellers, sustaining damages of \$30,844,479. Kopel Decl. Ex. 27, 3/30/18 Weir Decl. ¶ 9; *id.* Table 5.

Defendants' Response: Disputed. Plaintiffs' statement is an opinion and is not supported by the evidence in this case.

261. During the relevant time periods, the Nationwide Class purchased approximately 2,412,486 units of the Repellers, sustaining damages of \$51,501,545. Kopel Decl. Ex. 27, 3/30/18 Weir Decl. ¶ 10; *id.* Table 6.

Defendants' Response: Disputed. Plaintiffs' statement is an opinion and is not supported by the evidence in this case.

Respectfully submitted,

***BHH, LLC, and
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